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A MEDICAL MANUAL

AND

MEDICINE CHEST COMPANION,

FOR POPULAR USE

IN FAMILIES AND ON SHIP BOARD,

FOR THE TREATMENT

OF THE

Ordinary Diseases of the Human System.

BY THOMAS RITTER, M.D.,
MEMBER OF THE NEW YORK COUNTY MEDICAL SOCIETY.

FOURTH EDITION, REVISED AND ENLARGED.

NEW YORK:
S. W. BENEDICT, 16 SPRUCE STREET.

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BALSAM OF LIFE.
SODA, AND SEIDLITZ POWDERS.
COUGH DROPS, &C., &C.

THOMAS RITTER, M.D.,
104 Cherry-street, New York,
Four doors above Oliver.

Entered according to Act of Congress in the year 1849, by THOMAS RITTER, in the Clerk's Office of the District Court of the United States for the Southern District of New York.

PREFACE TO THE FIRST EDITION.

The author of this little work has been extensively engaged for several years past in putting up Medicine Chests for sea service. Of late he has devoted his whole attention to this branch of business. Many different books of directions have come under his notice, the largest share of which were very defective. Extensive intercourse with ship-masters and seamen has made him acquainted with their wants, and he flatters himself that he now presents to them a book of directions better adapted to their circumstances than any other to be found among the druggists of this city.

The writer has aimed at great simplicity in description and direction. Making no attempts to recommend himself by a show of learning, he has endeavored to adapt every sentence and every word of the book to the simplest mind, content if he may be useful to a class of men whose whole life is one of exposure and peril. Parts of the book are compiled from various sources; a large part, however, is the result of nineteen years' experience. It is not to be expected that every desirable article should be found in a ship, or family medicine chest; yet there are few diseases to which sea-faring men, or even families on shore, are exposed, for which an intelligent physician could not prescribe, out of the chests put up according to this book.

It has been the design of the author, in all cases

where two or more remedies may be used for the same disease, to mention them all, as it may often happen that the first mentioned article is not on hand, while another is, which will answer the same purpose.

It is a common fault of medicine-chest books that the directions are only for the first stage of the diseases. The writer has endeavored to detail the treatment of diseases to their termination. It is not to be expected that in the limits of such a work as this, every thing can be directed that is desirable to know, yet it is hoped that, through the Divine blessing, it may help to relieve human suffering, and preserve life when other means are not within reach.

PREFACE TO THE THIRD EDITION.

With much diffidence the author issued the first edition of this Manual. Of the many books of the kind that had come under his notice, all seemed to lack several things that are desirable in an accompaniment to a Medicine Chest. There are very few persons, not practitioners, who do not need very particular directions for the preparation and the administering of the medicines. The two best books the author has seen lack a materia medica, or a particular account of the uses and modes of administering each article in the Chest, with the needful cautions respecting over-doses and mistakes likely to occur. These desirable things the author of this book has endeavored to supply. He has been gratified, beyond all expectation, with the frequently expressed commendations of ship-masters and others, several of whom have remarked that the directions were so plain that a person wholly ignorant of Medicine would be unlikely to make a mistake.

This edition has been thoroughly revised and considerably enlarged. The author has been requested by several gentlemen in charge of passenger ships, to add to the chapter on Midwifery some directions for female complaints. This he has done, with reference both to families and shipping. He has also enlarged the department of Children's Diseases.

Some of the remedies directed in this edition, for female and other complaints, are not in the regular Medicine Chest list, but may be procured at any respectable drug store. It having been suggested by friends, that this edition be prepared more with reference to popular use, the author has had this end in view, and added a *secondary list* of medicines not ordinarily to be expected in a Medicine Chest, unless particularly ordered.

New York, Jan. 1, 1847.

CONTENTS OF THE CHEST.

No.		Doses, &c.
1.	Tartar Emetic - - -	Six grains, or the contents of one of the papers, in divided doses.
2.	Calomel and Jalap	15 grains of each to each dose.
3.	Calomel- - - - - - -	15 do. do. do.
4.	Powdered Rhubarb	30 to 40 grains, or one teaspoonful in molasses or water.
5.	Calcined Magnesia	1 drachm, or two heaped teaspoonsful.
6.	Purging Pills - - - -	3 to 4.
7.	Mercurial Pills - -	3 to 4 when used as a purge.
8.	Epsom Salts - - - - -	1 oz. to 2 oz. or 2 to 4 large spoonsful in cold water.
9.	Sulphur - - - - - - -	1 to 4 teaspoonsful in water or molasses.
10.	Cream of Tartar - -	2 large spoonsful heaped in half a tumbler of cold water, is an excellent purge.
11.	Peruvian Bark - - -	A teaspoonful in water or wine three times a day.
12.	Castor Oil - - - - - -	2 to 4 large spoonsful.
13.	Paregoric - - - - - -	1 to 2 teaspoonsful for an adult.
14.	Elixir Vitriol - - - -	10 to 30 drops in sweetened water.
15.	Fryar's Balsam - -	20 to 30 do. on sugar, when taken internally.
16.	Laudanum - - - - -	20 to 60 drops for an adult. [use.
17.	Hartshorn - - - - - -	20 drops in water for internal
18.	Essence Peppermint	20 to 40 drops.
19.	Mercurial Solution	is Corros. Sub. 10 grains, Alcohol, 1oz. — 15 drops twice a day in half a tumbler of water.
20.	Spirits Nitre - - - -	30 drops to a teaspoonful in cold water.
21.	Sulphuric Ether - -	One teaspoonful to a tablespoonful in sweetened water. Drink immediately.
22.	Syrup Squills - - - -	One teaspoonful, frequently repeated.
23.	Opodeldoc, or Camphorated Soap Liniment.	
24.	Balsam Copaiva - -	30 to 60 drops in water or sugar.
25.	Tinc. Bark or Bitters	A teaspoonful in wine or water, three or four times a day.
26.	Spirits Camphor - -	20 to 30 drops in water.

No.	Doses, &c.
27. Spirits Lavender - -	30 drops to a teaspoonful in water.
28. Antimonial Wine - -	1 to 4 teaspoonsful for an adult;
29. Cerate.	10 drops to 40 for a child.
30. Basilicon.	
31. Mercurial Ointment.	
32. Spread Adhesive Plaster.	
33. Blister Plaster- - -	May be spread on leather, muslin, or brown paper.
34. Strengthening Plaster.	
35. Surgeon's Lint.	
36. Chamomile - - - - -	A handful to a quart of tea.
37. Flaxseed - - - - - - -	2 tablespoonsful to a pint of tea.
38. Arrowroot - - - - - -	A tablespoonful makes a pint of gruel.
39. Red Precipitate.	
40. Blue Vitriol.	
41. White Vitriol - - - -	20 to 30 grains for a speedy emetic, in divided doses.
42. Sugar of Lead - - -	A teaspoonful to a pint of water for a wash.
43. Alum.	
44. Powdered Kino - - -	15 to 30 grains in molasses.
45. Fever (James') Powders - - - - - - - - - -	6 grains, or the contents of one of the papers in molasses.
46. Dover's Powders - -	10 to 15 grains, do. do. do.
47. Ipecac - - - - - - - -	30 to 40 grains in boiling water.
48. Quinine - - - - - - -	1 grain with 10 drops Elix. Vitriol and water.
49. Boneset (Thor'wort)	½ oz. to a pint of boiling water.
50. Salt Petre or Nitre	20 grains, or half a teaspoonful
51. Syringe.	in a little cold water.
52. Lancet.	

Bougies, Surgeon's Needles, Bandages, &c.

SECONDARY LIST FOR PACKET SHIPS AND FAMILIES.

Sulphate of Morphine.	Super Carbonate of Soda.
Gum Arabic.	Tincture of Myrrh.
Essence of Cinnamon.	Muriated Tincture of Iron.
Opium and Opium Pills.	Oil of Cloves.
Compound Tinct. Rhubarb.	Powdered Cubebs.
Uva Ursi.	Lunar Caustic.
Hydriodate of Potash.	

DIRECTIONS CONCERNING DOSES.

The doses of the foregoing medicines are for persons of good constitution, from 18 years of age and upwards. Under 18 years of age, the dose to be chiefly as follows: Children even in infancy, however, will take 8 or 10 grains of calomel for an ordinary dose, for worms or other complaints.

One year old, give one twelfth of the dose specified.
From 1 to 2, one eighth " "
" 2 to 3, one sixth " "
" 3 to 4, one fourth " "
" 4 to 7, one third " "
" 7 to 14, one half " "
" 14 to 18, two thirds " "

SCALES AND WEIGHTS.

The smallest weights in the box are grains; each *circular* impression stands for one grain. There are six other weights in the same box, viz:—

2 Drachms, ℥ij, or 120 grains.
1 Drachm, ℥j.
½ Drachm, ℥ss, or 30 grains.
2 Scruples, ℈ij.
1 Scruple, ℈j or 20 grains.
½ Scruple, ℈ss.

The respective denominations of which are plainly marked.

MEASURES.

An ordinary sized teaspoon contains about 90 drops or ℥j, one drachm. A tablespoon, ℥ss, or half an ounce. An ordinary sized tumbler, ℥viii, or eight ounces. A wine-glass, ℥ij, or two ounces.

MATERIA MEDICA.

DIRECTIONS.

No. 1. TARTAR EMETIC.

Dissolve six grains, or the contents of one of the papers, in six tablespoonsful of water, and give one spoonful every ten minutes, until it operates freely. Give lukewarm water, boneset or chamomile tea, during the operation. Cramps are to be allayed by twenty drops of laudanum, (No. 16.) Strong green tea, Peruvian Bark, (No. 11,) or common salt and water, should be given to check excessive vomiting, or a mustard plaster may be applied to the stomach externally.

To reduce fever and promote sweat, two grains, or one-third of the contents of one of the papers may be dissolved in a tumbler of cold water, of which the patient may take from one to two tablespoonsful every hour, or two hours. This is peculiarly useful after bleeding,—in pleurisy,—in coughs and colds. Should this move the bowels too freely, it should be omitted. Emetics should be used with great care, where there is a determination of the blood to the head, especially in persons of full habit, and when the patient has a rupture. Tartar emetic should not be used in what are called sinking diseases, as low typhus, or ship fevers, scurvy, &c., nor in inflammation of the stomach and bowels. Ipecac, (No. 47,) may be substituted, and used also at any time when a gentle emetic is required. (See *Antimonial Wine*, No. 28.)

No. 2. CALOMEL AND JALAP,

Is one of the most useful purges in bilious diseases, and proper to be used as an ordinary cathartic. Each paper contains thirty grains of calomel and jalap, being in equal parts, and may be taken in molasses or honey. These medicines should be kept in bottles, air-tight, as they soon lose their virtue from bilge water and dampness.

No. 3. CALOMEL.

Each paper contains fifteen grains, and in this dose is useful in bilious attacks, in the commencement of diarrhœa and dysentery, and in the course of these diseases, in the dose of one-third or half a grain with the same quantity of Ipecac, (No. 47,) every three hours, to change the secretions, and also where the tongue is coated with a moist yellow fur, and in a foul or acid state of the stomach. A very little upon the point of a penknife may be a sufficient measure for one-third or half a grain. Calomel is one of the best remedies for worms, either in children or adults. The latter may take 15 or 20 grains at night, followed by a dose of Pills, (No. 6,) next morning. Children from 5 to 10 grains.

No. 4. RHUBARB.

An excellent purgative in diarrhœa or looseness, especially when combined with calomel or magnesia. A teaspoonful of rhubarb, or about 30 or 40 grains, and two to four teaspoonsful of magnesia, with a few drops of Essence of Peppermint, (No. 18,) in half a tumbler of water, or the same quantity of rhubarb, and 5 or 10 grains of calomel in molasses, are suitable doses. This article is very apt to render the patient costive, yet if the root is chewed, and the *saliva* only swallowed by persons of dyspeptic habits, it may prove laxative without this inconvenience. Dose for children, 5 to 20 grains, from the age of one month to fourteen years.

No. 5. CALCINED MAGNESIA,

Should be kept in closely stopped bottles. It is useful in the dose of one to two teaspoonsful, in heartburn or sour stomach, or as a gentle purge, in milk or water, for children or adults. It is frequently combined with rhubarb, and given for diarrhœa or a foul stomach. Children take from 10 to 30 grains.

No. 6. PURGING PILLS,

Are a thorough and speedy purge, suitable for bilious complaints, foul stomach, obstinate costiveness, and for all cases requiring strong physic. These pills are composed of Aloes, Gamboge, Colocynth and Rhubarb.

No. 7. MERCURIAL PILLS.

Useful as a purge in the case of a foul tongue and yellow fur, which sometimes appears in the morning with an unpleasant taste in the mouth. Dose 3 to 4. Useful also in liver complaint and venereal disease. (See *Venereal Disease.*)

No. 8. EPSOM SALTS,

May be taken in the dose of one to two ounces, or two to four large spoonsful dissolved in a tumbler of cold water. They are a very cooling purge in fevers, and in external and internal inflammation.

☞ When a person has taken by mistake, or otherwise, an overdose of sugar of lead, or extract of lead, the best antidote to the poison is epsom salts dissolved and drank as soon as possible. They decompose the poison and carry it out of the system. Salts should not be taken to relieve a costive habit, as they increase it.

No. 9. SULPHUR,

If it were not for the odor that sometimes attends its operation, would be more used as a laxative than any other medicine. It is an excellent remedy in rheumatism in small doses of half a teaspoonful three or four times a day, in molasses or water, and in the dose of a large spoonful at night also. In dysentery, with pain and bloody stools, give a teaspoonful three times a day with strong flaxseed tea. It is a very good laxative in piles. It relieves salivation. Made into an ointment, with one part sulphur, and lard two parts, it is a sovereign remedy for the itch. Dose for children, one teaspoonful.

No. 10. CREAM OF TARTAR.

In the dose of an ounce or two large spoonsful heaped, in half a tumbler of cold or hot water sweetened, is a cooling and agreeable purgative. It is thus highly useful in dropsy, skin complaints, and in smaller doses, frequently repeated, in complaints of the kidney and bladder, such as gravel, strangury, &c. A heaped teaspoonful of cream of tartar and twenty to twenty-

five grains of jalap, in molasses or water, forms an excellent cathartic, especially in dropsical cases.

As a cooling drink in fevers it is of great service. The following is a very agreeable beverage:—Take cream of tartar, two teaspoonfuls a little heaped, and the rind of one lemon; pour on these a quart of boiling water, and when cold, add sugar to make it palatable.

No. 11. PERUVIAN BARK.

For the various uses of this medicine, see fevers, gangrenes, decoction of bark, &c. As this article is of varied strength, and easily loses its virtue at sea, Quinine, (No. 48,) is preferable for most purposes for which bark is prescribed. Dose, a teaspoonful.

No. 12. CASTOR OIL.

Well known as a mild and speedy purge, operating sooner than most other cathartics. It is much used in dysentery. Dose, from one to four large spoonsful, to which may be added ten drops of Laudanum, (No. 16,) if it occasions griping. Some cases of cramp in the stomach are relieved by two or three teaspoonsful of castor oil and thirty drops of balsam copaiva combined. Dose for children, two to four teaspoonsful.

No. 13. PAREGORIC ELIXIR.

For coughs arising from irritation or tickling in the chest, where there is no inflammation, one or two teaspoonsful may be taken in water or flaxseed tea, three times a day. It is also used for children to quiet restlessness and promote sleep. Dose for children, 16 drops to a teaspoonful. 16 drops contain one drop of laudanum. (See *Cough Drops*, p. 30.)

No. 14. ELIXIR VITRIOL.

It is an excellent tonic for indigestion or debility of the stomach; and for general weakness of the system, especially when combined with a grain or two of white vitriol. It is a remedy generally used for night sweats, and is useful to check profuse sweats of any kind, to increase the appetite, and for the scurvy of the

gums, or for general scurvy, in the dose of 15 drops to 30, in a wine glass or more of sweetened water, three or four times a day. In bleeding from the lungs, ten drops may be taken every hour or two, unless sugar of lead has been taken just before. It should not be administered soon after the lead has been taken for the same purpose, as they mutually destroy each other's medical powers. (See *Sugar of Lead*, No. 42.) Thirty or forty drops to a tumbler of water, with the addition of a little sugar, makes a cooling drink in fevers. This medicine may be used with the Tinct. Bark, (No. 25,) and with the decoction of bark, as a strengthening remedy after fevers, or other debilitating diseases. The doses of Quinine, (No. 48,) may be combined with, and be dissolved in it with the addition of a tablespoonful of water to five drops of the elixir vitriol.

No. 15. TURLINGTON'S, OR FRYAR'S BALSAM,

Is most generally used as an application to wounds and sores. It is a good remedy, taken inwardly, for coughs, cramp in the stomach and bowels. It has been found useful to stop bleeding from the lungs, for diarrhœa of long standing, especially that occasioned by ulcerations of the bowels. Dose, 30 drops to two teaspoonsful.

No. 16. LAUDANUM.

Twenty to forty drops procure sleep and relieve pain, and may be repeated in half an hour if the pain continues. If the pain is severe without inflammation of some vital or important organ, the dose may be increased to sixty drops, and in extreme pain to a teaspoonful. In diarrhœa, laudanum is ordinarily unsafe, until after the operation of a cathartic. In Asiatic cholera, laudanum is of the greatest importance. It should be given in full doses, combined with ether, hartshorn, camphor, and peppermint, as directed in the article upon this disease. Twenty-five drops is equal to a grain of opium, or ten grains of Dover's powders. When used by injection, the system will bear four times the quantity taken by the mouth. (See *Recipes*

for Anodyne Injection, p. 31.) ☞ Laudanum, when long kept, sometimes deposits a part of the opium, and becomes turbid; when this is the case, it should be carefully filtered through unsized paper, before it is used internally, as it is unsafe, because its strength is uncertain.

No. 17. HARTSHORN.—*(Aqua Ammoniæ.)*

May be applied to the nostrils, and 20 drops in a little water may also be taken into the stomach for faintings, fits, &c. Equal parts of hartshorn and olive oil form a volatile liniment. In cramps and in severe pains of the stomach and bowels, equal parts of Ether, (No. 21,) Spirits Camphor, (No. 26,) Laudanum, (No. 16,) and Spirits of Lavender, (No. 27,) may be given in sugar and water, in the dose of one to two teaspoonsful, and repeated in half an hour if necessary.

No. 18. ESSENCE OF PEPPERMINT.

A suitable remedy to relieve pain and griping of the stomach and bowels from wind. Dose, 20 to 30 drops on sugar, or in a little warm water.

No. 19. MERCURIAL SOLUTION,

Is corrosive sublimate ten grains, alcohol one ounce, and is useful in the dose of from six to ten drops, twice a day in water, in some obstinate eruptions of the skin. It acts as a caustic upon a raw or ulcerated surface. (See *Venereal Disease.)*

No. 20. SPIRITS OF NITRE,

In doses from 20 to 60 drops, in a suitable quantity of water, relieves fever, allays thirst, expels wind, and strengthens the stomach. For urinary complaints, it should be taken in the dose of from one to three teaspoonsful. Equal parts of Spirits Nitre, Ether, and Antimonial Wine, in the dose of a teaspoonful every two or three hours, is an excellent medicine to produce sweating and relieve fever.

No. 21. SULPHURIC ETHER.

This medicine ought to be in every medicine chest,

and every family. Its great variety of uses, its instant operation, renders it of great value in sudden attacks. Its influence is felt to the ends of the fingers and toes almost as soon as swallowed. It relieves cramp, dizziness, palpitation of the heart, cholera morbus, Asiatic cholera, faintings, wind in the stomach and bowels producing cholic. Asthma is relieved on breathing the vapor of ether. It may be used for wind cholic by injection, mixed with the common laxative injection. (See *Recipes*, p. 31.) I have never found any remedy so speedily to compose both mind and body in delirium tremens, or the horrors, after an emetic. (See *Delirium Tremens.*) It is useful also in dyspepsia, combined with Tinct. Bark, (No. 25,) three or four times a day. It may be applied externally for head-ache, tooth-ache, rheumatism, gout, ruptures. (See *Ruptures.*) Dose, one teaspoonful in sugar and water every half hour until relief ensues.

The water and sugar should be first mixed, and when the patient is ready to receive the dose, the ether should be added and swallowed immediately, as it evaporates very rapidly. Great care should be taken to keep this article from a lamp, as it takes fire as readily as gunpowder.

No. 22. SYRUP OF SQUILLS,

Is used chiefly in hoarseness and coughs, either alone or in combination with other expectorants. Dose one to two teaspoonsful. (See *Coughs* and *Colds.)*

No. 23. OPODELDOC, OR SOAP LINIMENT,

Is used to rub joints and other parts of the body affected with rheumatic or other pains, bruises, swellings, &c. One ounce or two tablespoonsful of opodeldoc, and two drachms, or two teaspoonsful of Laudanum, (No. 16,) forms an anodyne liniment for dispersing indurations, swellings attended with pains without inflammation.

No. 24. BALSAM COPAIVA,

Is a remedy for various diseases, which are seated in those membranes which line all the passages or cavities

that open outwards, as piles, gonorrhœa, or clap, in chronic inflammation of the air passages of the lungs, in coughs arising from this cause, and in a relaxed state of the palate and back parts of the throat. It is useful also in that disease commonly called catarrh, accompanied by a discharge from the back part of the nostrils, like the white of an egg, and sometimes offensive. Some cases of costiveness also are much relieved by this medicine. It may be also used in strains affecting the kidney. Dose, 30 drops to a teaspoonful, three times a day.

No. 25. TINCT. BARK, OR BITTERS.

Dose, one or two teaspoonsful in water or wine, with or without 10 or 12 drops of Elixir Vitriol, (No. 14,) thrice a day for scurvy, debility, or loss of apetite.

No. 26. SPIRITS CAMPHOR.

One teaspoonful is equal to four grains of gum camphor, twenty-five drops to one grain. Spirits camphor is used externally for head-ache and other pains, inflammations, numbness, sprains, &c. It is one of the best remedies for small worms in the extremity of the bowels, by injection, in the dose of two teaspoonsful of the spirits of camphor in half a tumbler of milk, oil, or water. Dose by the mouth, 20 drops to a tea spoonful, in water.

No. 27. SPIRITS OF LAVENDER.

Anti-spasmodic and stimulant, in general use against nervous diseases, lowness of spirits, weakness, trembling, fainting, hysterics, sea-sickness, and to flavor other medicines. Dose, 30 to 50 drops.

No. 28. ANTIMONIAL WINE.

A tablespoonful contains one grain of tartar emetic. Half a teaspoonful, or 40 drops, is equal to one-eighth of a grain. Antimonial wine is used as an emetic, and also as an expectorant and febrifuge. Where it is designed to vomit, a child six months old may take 5 drops,—

1 to 2 years, may take - 10 to 15 drops.
3 to 4 " - - - 20 to 30 "
5 to 6 " - - - 40 to 50 "
7 to 15 " - - from 1 to 1½ teaspoonsful, to be repeated every fifteen minutes till it operates.

A grown person may take a tablespoonful at once, and two teaspoonsful every fifteen minutes afterwards till an ounce has been taken, or vomiting produced; promoting its operation by drinking freely of warm water, or chamomile tea. When it operates too severely, a small quantity of salt and water, or strong green tea, will check it, and turn the effect downwards. (See *Cough Drops.)*

No. 29. TURNER'S CERATE,

Is an excellent application to ulcerations arising from burns and scalds. It may be applied to any healthy sores, trifling injuries of the skin, and as a healing dressing to blisters. It may be used for the same purpose as Simple Cerate.

No. 30. BASILICON.

Useful to keep blisters open, applied on cotton or linen cloth, for burns and scalds, and to stimulate and procure a healthy discharge from ulcers that are not clean, and from wounds disposed to heal but slowly. The dressings should be renewed twice a day.

No. 31. MERCURIAL OINTMENT,

Is used to destroy vermin upon the human body. Rub a little on the parts affected. (See *Venereal Disease.*) Steel and iron covered with a little of this ointment will be preserved a long time free from rust.

No. 32. SPREAD ADHESIVE PLASTER.

This is the best and most convenient application to cuts and other fresh wounds. The dirt, blood, &c., should be washed out, the plaster cut into strips one-eighth to one-quarter of an inch wide, and in cool weather warmed and applied. Let the edges of the wound be as closely drawn as possible, until the whole of the wound is covered. A piece of Lint, (No. 35,)

spread with Basilicon, may be laid over the strips, and a bandage bound moderately tight over the whole. Old sores that are difficult to heal may be much benefited by the application of long strips applied in such a manner as to draw the sides nearer together, especially if bathed twice or thrice a day with a wash made by dissolving a drachm or a teaspoonful of White Vitriol, (No. 41,) in a pint of fresh water.

No. 33. BLISTER PLASTER.

Should be spread even upon leather, firm muslin, or linen, or upon strong brown paper, of the size of the blister desired. The plaster may remain from six to twelve hours. Let the part be previously rubbed with spirits of turpentine. When the blister rises, let out the water, and dress with Basilicon, (No. 30,) if you wish the blister to remain open, or Turner's Cerate, (No. 29,) if you wish it to heal soon.

In pleurisies and other inflammatory diseases, blisters should in general not be applied until after blood has been taken. Blisters should not be applied to the head itself, but to the nape of the neck, or to the shoulders. They sometimes affect the bladder, and prevent a free discharge of urine. This may be prevented by sprinkling over the plaster a little powdered camphor, or relieved by a dose of Laudanum, (No. 16,) Spirits Nitre, (No. 20,) or by drinking flaxseed tea or barley water freely.

No. 34. STRENGTHENING PLASTER.

Applied to strains, rheumatic pains, pains in the side or breast. It should be spread on leather.

No. 35. LINT,

Is applied as a soft dressing to wounds, and over adhesive plaster, to absorb the discharges. It may be spread with basilicon or other cerate, which will make the next dressing of the wound much easier. Care is to be taken in spreading cerate upon lint, to spread it lengthwise of the threads. Where lint is applied dry, it should be soaked off with warm water at the next dressing.

No. 36. CHAMOMILE FLOWERS,

Are a very useful stomach bitter. They are more grateful in the form of cold infusion made by letting cold water remain on them a few hours. Dose, a wine glass three or four times a day. In this way persons whose digestion is weak from long residence in hot climates, from excessive drinking or other causes, will find them useful.

Warm chamomile tea is generally used during the operation of an emetic, and will be found useful in cramps of the stomach, in spasmodic and wind cholic, in all those sudden attacks of fever in summer and autumn. It will oftentimes check that vomiting which arises from disease, in cholera morbus, &c. Chamomile flowers are sometimes used in hot fomentations, to relieve pain and promote suppuration, or the formation of matter.

No. 37. FLAXSEED.

An excellent soothing tea is made by boiling two tablespoonsful a few minutes in a quart of water, which may be drank freely in colds, hoarseness, coughs, pleurisies, pains in the kidneys, and in scaldings of the urinary organs.

No. 38. ARROWROOT.

A nutritious unirritating article of diet for sick persons. (See *Recipes*, p. 29.)

No. 39. RED PRECIPITATE,

Is principally used to sprinkle sores, to eat away fungus or proud flesh, or upon old sores to promote the discharge of healthy matter.

No. 40. BLUE VITRIOL.

Used for the same purpose as (No. 39.)

No. 41. WHITE VITRIOL, OR SULPH. ZINC,

Is a very speedy vomit; hence it is the best emetic in cases of poisoning. Dissolve 30 grains, or the contents of one of the papers, in four tablespoonsful of water, and take one every ten minutes until free vomiting ensues. It is equal to Quinine in fever and ague,

and one or two grains may be combined with a few grains of Cayenne pepper, and administered every three hours between the fits, and the same dose three times a day to prevent their return. A piece equal to the size of a duck-shot perhaps is a sufficient measure for a dose where scales and weights are not at hand. A drachm or an even teaspoonful, dissolved in a pint of fresh water, makes an excellent wash for old sores or proud flesh in unhealthy wounds. This is also suitable for injection in the *very earliest* stage of the clap, and after the running has continued for a long time. White vitriol is also an excellent tonic in the latter stages of typhus fever, and during convalescence, and can be taken a long time without injury. (See *Tonic Solution*, under the head of recipes.) The tonic solution is well adapted to check bleeding from the stomach or lungs. Dose, one or two teaspoonsful every hour or two. It makes a good gargle in putrid sore throat.

No. 42. SUGAR OF LEAD.

May be used in all cases where extract of lead is useful. A drachm or a teaspoonful to a pint of water makes lead-water, or a proper wash for sores and for injection into the urethra. Linen cloth and lint dipped in it may be applied to burns, inflammations, and gun-shot wounds. These applications should be frequently repeated. For inflamed eyes the wash should be but half this strength. Sugar of lead is one of the most prompt remedies for inward bleeding, such as from the lungs, stomach, womb, nose, &c., that can be administered. It should always be guarded by laudanum or opium, two or three grains mixed up into a pill, with a quarter to a half grain of opium, or in powder with ten or twelve drops of Laudanum, (No. 16,) mixed with molasses every half hour until the bleeding ceases. Within six hours from the first dose, let the patient take a moderate dose of Castor Oil, (No. 12.) Half a drachm to one drachm finely powdered, and thoroughly mixed with about an ounce of lard, or two tablespoonsful of sweet oil, is an excellent application to external piles.

No. 43. ALUM.

A strong solution of alum, either with or without the mixture of linseed or sweet oil, is the best application to recent burns that I have ever used. Cloths or Lint, (No. 35,) dipped in the solution, should be laid upon the burn, and repeated as often as they get dry. Alum may be used for internal bleedings, and in diarrhœa after a cathartic. In painters' and bilious cholic, with obstinate constipation of the bowels, ten or twenty grains repeated every six or eight hours, duly persisted in, prove gentle laxatives, and mitigate the pain. (See *Tonic Solution*, p. 30.)

No. 44. POWDERED KINO.

An astringent for diarrhœa, the latter stages of gonorrhea, and for gleet. It is peculiarly useful in the diarrhœa of Canton, and other hot climates, where the patient has little or no fever. Each paper contains fifteen grains, to be taken in molasses three or four times a day. The dose can be doubled if necessary.

No. 45. ANTIMONIAL, FEVER POWDER.

Long known by the name of James' Powders.—It is an excellent medicine in all bilious and inflammatory fevers. In colds, coughs, pleurisies, and almost all other fevers, it is useful to promote perspiration, especially when followed by warm, mild drinks, as boneset tea, hot lemonade, &c.

Antimonial tartar emetics, and fever powders in typhoid or low nervous fevers, should very rarely be used, on account of their debilitating effects. Dose, 6 grains; for children, 2 to 4 grs.

No. 46. DOVER'S POWDERS.

Long known as a medicine to promote perspiration, relieving rheumatic and other pains, quieting restlessness and inducing sleep. Many persons who cannot take either solid opium or laudanum are able to bear opium, as combined in Dover's powders. They may be used in typhus and bilious fever, rheumatism, and latter stages of pleurisy, and in coughs and colds. Should the tongue be dry in the morning, where this

medicine has been administered the night before, it should be omitted.

Ten grains contain one grain of opium. Dose, from 10 to 15 grains, for an adult.

No. 47. IPECACUANHA, (EMETIC,)

Is a much milder vomit than tartar emetic, and is perfectly safe, as it does not act with violence nor continue its emetic operation, unless continually administered. It is suitable in feeble habits, and sinking diseases, when an emetic is indicated. It is proper to administer Ipecac, in severe colds, diarrhœa or dysentary. It may be continued in the dose of from one-eighth of a grain, or a little upon the point of a penknife, to half a grain, every three hours, in water or molasses, in those diseases, and for bleeding from the lungs, cough and asthma. It is useful to check vomiting that arises from a foul stomach, &c., given in vomiting doses.

Dose, thirty to forty grains. For a child under twelve years of age, six to fifteen grains. Each paper contains thirty grains. Mix the Ipecac with a little boiling water, then add 6 tablespoonsful more. Take half the dose at the first draught, and a tablespoonful every ten minutes until it operates freely. Sometimes two grains or one third of a paper of Tartar Emetic, (No. 1,) may be advantageously united with it. For children let a teaspoonful be substituted for a tablespoonful.

No. 48. QUININE,

Is known more particularly as a remedy in fever and ague. Dose, one grain to three or even five grains every three hours before the chill. The same dose should be continued three times a day to prevent the return of the disease. An emetic or cathartic should precede the use of the quinine. It is also an excellent strengthening medicine after a fever has subsided, and left the patient weak, in loss of appetite, and in general debility, where the tongue is not coated with fur. Each paper contains one grain, and may be dissolved in four or five drops of elixir vitriol. Children may take a fourth of a grain, to one grain.

No. 49. BONESET, OR THOROUGHWORT,

Made into a strong tea, and drank largely, is emetic; half a tumbler every three hours before the cold fit of fever and ague, will oftentimes cure the disease. Boneset tea, weak, may be drank freely, during the cold and hot fits, where there is not excessive inflammatory excitement, and in colds to promote perspiration. Boneset is an excellent tonic for dyspepsia, in the form of cold infusion made by pouring cold water to a small quantity of the herb. Dose, half a tumbler three times a day.

No. 50. SALTPETRE, OR NITRE,

In the dose of fifteen or twenty grains, or half a teaspoonful dissolved in a little cold water, and drank immediately once in two or three hours, relieves fever. Two parts each of Cream of Tartar, (No. 10,) and of Sulphur, (No. 9,) with one part of powdered nitre, form an efficacious remedy in obstinate claps and gleets. Dose, one teaspoonful three times a day. A teaspoonful of cubebs, when they can be procured, added to each dose, renders this compound still more efficacious.

No. 51. SYRINGE.

No. 52. LANCET.

SECONDARY LIST.

The following described medicines are added for general use on shore, as they can be procured at any time from the apothecary, and for the larger packet ships. They are prescribed in this edition mostly as additional remedies to those numbered in the previous pages, and are not to be expected in ordinary medicine chests unless particularly ordered.

SULPHATE OF MORPHINE.

This article is a chemical preparation of opium, and bears the same relation to it that quinine does to

Peruvian bark. It contains the narcotic or soothing principle of laudanum or opium, and can be employed in a great proportion of cases where crude opium produces uncomfortable symptoms. The dose for an adult is from one eighth of a grain to half a grain. It may be given in powder or solution. The latter may be formed by dissolving one grain in three or four drops of Elixir Vitriol, (No. 14,) and mixed with an ounce of water. One teaspoonful of the solution contains one-eighth of a grain of morphine, equal to about fifteen or twenty drops of laudanum.

GUM ARABIC.

The preferable form of this article is the powder, as it is more conveniently added to various mixtures and solutions, and is used in medicine chiefly as a demulcent in coughs and other irritations of the lungs; in diarrhœa, combined with other medicines or by itself in solution, in inflammatory affections of the lining membranes of the lungs, stomach, bowels, kidneys, bladder, &c. It is an unirritating and nourishing article of diet. An ounce of the gum boiled in a pint of water may be used both as food and drink of the patient.

ESSENCE OF CINNAMON.

This article is designed to cover the unpleasant taste of medicines and is more agreeable to many persons than the essence of peppermint. It is useful, also, to relieve wind in the stomach and bowels. With rhubarb and magnesia it modifies their action in diarrhœa and other complaints. It enters into the composition of the well known "Chalk Mixture."

OPIUM AND OPIUM PILLS.

It is occasionally desirable to give opium in its solid state, instead of either laudanum or morphine. In inflammatory affections, before bleeding, it should rarely be given in any form. In affections of the brain and of the lungs, with quickened pulse and dry cough, never. In cholic and cholera morbus it is preferable to laudanum or Dover's powder, for if it is rejected

from the stomach it may be seen, and the succeeding administration of it regulated accordingly. A pill of opium introduced into the fundament, in diarrhœa, has the same effect to control the discharges as the anodyne injection of starch and laudanum. The system will bear four times the dose thus administered that can be given by the mouth. Opium pills should be one grain each.

COMPOUND TINCTURE OF RHUBARB.

This is a favorite remedy of many persons for diarrhœa. It is, however, objectionable from the amount of spirit it contains. It should not be administered in any case where inflammatory action or fever exists, nor to a reformed inebriate, lest he may suffer a relapse to his former habits. One or two tablespoonsful is a laxative dose for an adult. One or two teaspoonsful before eating is a good stomachic in flatulency and indigestion.

UVA URSI, OR BEARBERRY LEAVES.

This plant is an excellent remedy for a variety of urinary and dropsical complaints. In gravel, combined with gum arabic and cream of tartar, the uva ursi more speedily produces relief than anything I ever tried. It is a proper remedy in strictures or suppression of urine. In all stages of Gonorrhœa, especially in the latter stages, the above combination is a valuable remedy. In bloody urine, chronic inflammation of the bladder, and in dropsy, it is a safe and efficacious remedy. It may be thus prepared. Pour upon an ounce of the leaves, one ounce of gum arabic, and half an ounce of cream of tartar, a pint of boiling water. After simmering gently for five or ten minutes, stir it up that the gum may be well dissolved, pour it off and sweeten with sugar. Dose, a wine glass three or four times a day. During an attack of gravel, or obstruction of urine, the dose may be repeated every half hour.

HYDRIODATE OF POTASH.

This medicine is sometimes called Iodide of Potassium, and is a combination of iodine and potash. It has come into extensive use within a few years for scrofulous and a great variety of other complaints. It is administered internally in the form of solution in water, and externally as an ointment. The solution is made by dissolving one drachm in a pint of water. Dose, two large spoonsful three times a day. This dose may be safely doubled. To form the ointment, dissolve a drachm in one or two teaspoonsful of water, and rub it up with an ounce of lard or simple cerate. In rheumatic affections hydriodate of potash is the most satisfactory remedy I ever used. Three ounces of Opodeldoc, (No. 23,) combined with an ounce of tinct. of iodine, or four ounces of the opodeldoc combined with a drachm of the hydriodate, dissolved as for making the ointment, forms an excellent liniment to promote the absorption of swellings that are not inflamed, to relieve white swellings, rheumatism, &c. It should be administered internally at the same time. In nocturnal pains, and after a course of mercury, it is a very valuable remedy. The decoction, or syrup of Sarsaparilla is an excellent assistant in all these complaints. A variety of skin diseases give way under the continued use of this remedy. In bad constitutions, subject to ulcers, and in what is called a bad state of the blood, it may be used in most cases with signal advantage. Two or three cases of habitual costiveness were cured by a daily use of the solution for a short time. It is a proper remedy in female complaints, as leucorrhœa or whites, suppression of the monthly discharges, &c.

SUPER. CARBONATE OF SODA.

This article, with tartaric acid, forms the well-known soda powders. The blue paper contains the soda, and the white the acid. A teaspoonful of soda dissolved in a tumbler of cold water forms a solution of suitable strength for heartburn or sour stomach, one-fourth of which is a proper dose. Five or ten grains rubbed

with the ordinary dose of Rhubarb and Magnesia, assists and modifies their operation. Buckwheat and other fried cakes are rendered much more digestible by the addition of a little soda. The yeast powders found in the shops are composed of about two teaspoonfuls of Super. Carb. Soda, and in the white papers one teaspoonful of tartaric acid.

TINCTURE OF MYRRH.

All the virtues of gum myrrh are contained in the tincture. It strengthens the stomach and the system generally. It is a common remedy in female complaints, and in the form of a wash mixed with water, for foul ulcers, and for the teeth and gums. Dose, from forty drops to a teaspoonful, in water.

MURIATED TINCTURE OF IRON.

This and all other forms of iron are excellent tonics or strengthening medicines, especially in female complaints. The tinct. of iron is used most frequently in urinary complaints. It is particularly useful in suppression of urine that arises from spasm. Given in doses of from ten to twelve drops every ten or fifteen minutes, it sometimes procures prompt relief in the most obstinate cases. It is a good remedy in excessive menstruation, in leucorrhœa or whites, and in the latter stages of gonorrhœa and gleet, in bloody urine, and irritation of the neck of the bladder, where there is no fever. Dose, ten to twenty drops.

OIL OF CLOVES.

This is a perfectly safe remedy for tooth-ache, better than Creosote. The latter, in one case known to the author, destroyed life by being accidentally swallowed.

POWDERED CUBEBS.

Used chiefly in gonorrhœa, in the dose of a teaspoonful three times a day.

LUNAR CAUSTIC.

Is used to destroy proud flesh in ulcers, warts, and other small excrescences. (See Venereal Diseases.)

RECIPES.

DECOCTION OF BARK.

To an ounce, or about four tablespoonsful of bark, add one and a half pints of water; boil slowly in a covered vessel ten minutes; strain while hot, and set it by to cool. The dose is from half to a whole wine-glass full, repeated occasionally, or at intervals, with one or two teaspoonsful of tincture of bark (No. 25.) It will not keep long, and should be made fresh every day.

INFUSION OF BARK.

Take the same quantity of bark as in the preceding article; add a pint of water and a gill of brandy; let them stand for 24 hours, and pour off the pure liquor. This keeps better than the decoction, and is an elegant form of exhibiting the bark when the stomach is weak and delicate. It is used principally in indigestion, in doses of a wine-glassful, twice or thrice a day.

VOLATILE LINIMENT.

Take the spirits of hartshorn, two parts, olive or castor oil, three parts; mix them together. This liniment, applied to the throat and neck with a piece of flannel over it, is very efficacious in relieving soreness and inflammation in these parts. It is also a good application for rheumatic and other pains.

MUSTARD POULTICE.

Take some pounded bread, or Indian meal, and boil it a few minutes in water, spread it thick upon a cloth, and sprinkle on it powdered mustard; or if great haste is required, mix up some mustard in vinegar and water and spread thin upon linen or muslin cloth, and apply it to the part. If the plaster is left long upon the skin it occasions a troublesome blister.

TAR WATER.

Take of tar one pint, water one gallon; boil them together fifteen minutes, frequently stirring them; afterwards pour off the water for use. This is a valuable application for the piles.

POULTICES FOR SORES AND INFLAMMATIONS.

Take of Indian meal, or pounded bread and pounded flaxseed, equal parts, boil them together fifteen or twenty minutes, and spread the mixture more than half an inch thick on rags, and apply them warm. They should be renewed every three or four hours. Poultices may be made likewise of oat or Indian meal, rice, or peas, or onions, and in swellings and inflammations, white beans and turnips are very good.

SWEATS.

Sage and green or black tea, mixed and drank freely, and hot lemonade, are good to bring on a sweat; also, boneset, catmint, saffron, mullen, &c. In general, sweats are best procured by drinking plentifully of weak and warm drinks; they ought to be continued a considerable length of time, and not to be checked too suddenly, and care taken against catching cold.

TOAST WATER.

Is made by steeping slices of soft fresh bread in water, first toasting the bread till browned thoroughly, and then putting it into the water while hot. If soft bread cannot be had, the hard kind must answer.

ARROWROOT GRUEL.

A pint may be prepared by rubbing up a table-spoonful of the arrowroot with a little cold water, which should be poured into a pint of boiling water; add a little salt; let it boil three or four minutes, constantly stirring it. It may be sweetened with sugar, and a little nutmeg added to it. When milk can be procured, it may be used with an equal quantity of water.

TONIC SOLUTION.

Take of White Vitriol, (No. 41,) three drachms, or two teaspoonsful slightly rounded, Alum, (No. 43,) one drachm, or a piece as large as a moderate sized chestnut, hot water, one pint.

An excellent remedy in fever and ague, dysentery, diarrhœa, debility, loss of appetite, in the dose of a teaspoonful several times a day. 20 to 40 drops for a child thrice a day. A speedy emetic in the dose of a tablespoonful in case of poisoning, and in the commencement of fever and ague.

COUGH DROPS, (No. 1.)

Take Paregoric,	No. 13	equal parts.
Fryar's balsam,	15	
Spirits nitre,	20	
Syrup squills,	22	
Antimonial wine,	28	

Sweeten with honey, sugar, or molasses. Dose, one or two teaspoonsful several times a day.

COUGH DROPS, (No. 2.)

The following is the best expectorant mixture I have ever known for recent colds, hoarseness, or long standing coughs. The prescription can be obtained of any respectable druggist:

Tincture of cohosh,	equal parts.
" of bloodroot,	
Paregoric elixir,	
Antimonial wine,	
Syrup of squills,	
Syrup of tolu,	

Dose from one to two teaspoonsful frequently. Syrup of Ipecac, in some cases, will be found to agree better than the antimonial wine.

EYE WATER.

Take Sugar of Lead, (No. 42,) 16 grs.
White Vitriol, (No. 41,) 12 grs.

Dissolve each article separately in half a tumbler of water. Mix the two solutions, pour off the clear liquor, and drop a few drops into the eye thrice a day.

PURGING, OR LAXATIVE INJECTION.

Common salt, two large spoonsful; water, one pint; molasses, one gill; mix. In case there is obstinate costiveness, add from a wine-glass to a gill of spirits of turpentine.

ANODYNE INJECTION.

This injection is intended to check frequent discharges in diarrhœa. A pill of opium inserted into the anus will produce the same effect.

Thin flour starch, half a tumbler, laudanum from 40 drops to a teaspoonful for an adult; mix.

Pour the above into the syringe, and turn the point of the pipe upward, and push up the piston or handle until the starch appears at the point, when all the air will be excluded. Gently push up the contents of the syringe, and repeat the dose when the first comes away, for frequent and slimy stools in dysentery and diarrhœa. Four times the quantity of laudanum can be given by injection that is taken by the mouth. In those diseases where the patient's strength is much reduced, and nourishment cannot be retained upon the stomach, injections of fat broths, gruel, barley water, or beef tea, (without any salt,) will often support them a long time. They may also be used in other cases where a simple injection is wanted.

SEIDLITZ POWDERS.

Dissolve two heaped teaspoons of Seidlitz mixture in two-thirds of a tumbler of cold water, and stir in an even teaspoonful of tartaric aid, and drink immediately.

SODA POWDERS.

The same quantity of tartaric acid dissolved in about a wine-glass of cold water and a teaspoon slightly heaped of the super-carbonate of soda in half a tumbler more; mix the two solutions and drink immediately. This is cooling, refreshing, and checks vomiting, &c. Seidlitz and soda powders put up in bottles, and used as above directed, will be kept always good.

ALUM WHEY.

Boil a drachm or a teaspoonful of powdered alum in a pint of milk a few minutes. Strain off the whey and give a teacupful three or four times a day.

CHALK MIXTURE,

Is a useful medicine in simple diarrhœa, or looseness, and may safely be given in all cases where there is little or no fever, and the purging is unaccompanied with severe griping. It is thus prepared:—take of prepared chalk, one ounce and a half; white sugar, one ounce; powdered gum arabic half an ounce; oil of cinnamon, twelve drops. Rub them together. Dose, a teaspoonful in a wine-glass of water every two hours for an adult, and half that quantity for a child. Or the whole may be mixed at once with a pint and a quarter of cold water and given as above, always shaking the medicine before using. A drachm of powdered kino, (No. 44,) in severe cases, may be added to the mixture, and sixty drops of laudanum, (No. 16,) or six drops to a dose for grown persons. The dose for children must be varied from half a drop to two drops of the laudanum, according to age.

DEWEES' VOLATILE TINCTURE OF GUIAC.

Take of coarsely powdered gum guiac, 4 ounces; cubebs bruised, 1 ounce; super. carb. soda, or saleratus, 1½ drachms; hartshorn, (No. 17,) ½ ounce; common spirits, a pint. Let it stand ten days, occasionally shaking the bottle. An excellent remedy in dyspepsia, loss of appetite and female complaints. Dose, one or two teaspoonsful, three times a day, in sweetened milk or water. (See Female Diseases.)

MYRRH MIXTURE.

Take of gum myrrh, 3 drachms; copperas, 1 scruple; sup. carb. of soda, 1½ drachms; white sugar, 1 ounce; 1 large nutmeg; oil of anise, or mint, 10 drops. Let the articles be powdered coarsely, either separately or mixed. Put them into a bottle. Having warmed the bottle previously, to prevent its breaking, pour upon

the medicine three-fourths of a tumbler of boiling water. Cork the bottle immediately. After standing not less than half an hour, add half a tumbler of alcohol. Dose, a tablespoonful three times a day, with as much water. This is a valuable remedy in dyspepsia, in female complaints, &c.; an excellent tonic in consumption, and debility from long continued nursing, &c.

FEMALE PILLS.

R. Powdered bloodroot, ℥ss.
" sulphate of zinc, ℥j.
" aloes, ℥j.

Make up into common sized pills with mucilage of gum arabic for suppressed menstruation.

Dose, one pill three times a day for a month, unless the desired effect is produced.

FAMILY PILLS.

In this day of quackery and imposition, the public are induced by flaming advertisements and fictitious certificates, to patronize some of the most ordinary prescriptions and swallow injurious pills in large quantities. To prevent this, in some degree, I have been induced to present the following formula. It makes an excellent pill for family use. It neither sickens nor gripes the patient, but operates effectually, yet very mildly. Whoever tries them once will be disposed to use them afterwards, if occasion requires. Any apothecary can make them up.

R. Aloes, 6 parts.
Scammony 3 "
Gamboge, 1 "

Make into five grain pills with a little water. Dose one pill as a laxative, three or four for a purge.

GENERAL RULES

FOR THE PREVENTION OF DISEASES AMONG SEAMEN.

1. Avoid the use of ardent spirits, even in moderate quantities. Strong drink invariably predisposes to disease.

2. Use tobacco sparingly, if at all. It never defends from disease, and a free use of it deranges the powers of the stomach, induces trembling, and increases the susceptibility to every indisposition.

3. Pay strict regard to cleanliness of person and clothing; let the vessel also be kept clean, well ventilated, and as dry as possible.

4. Use the purest water, and eat freely of vegetables, especially in long voyages. Keep the bowels open.

5. Observe regular hours for sleep; and let it not be indulged on deck, or on the shore; especially if the season be warm and the seamen are unused to the climate.

6. Keep the dress as dry as possible, and adapt it to the temperature of the climate. It is generally best to wear flannel next the skin.

7. Correct the moisture of the lodging apartments every evening, by a fire in the stove.

8. Select anchorage to the windward of the land.

9. If disease of a fatal character be already aboard, separate the well from the sick; and in case of death, the clothes of the diseased should be thrown overboard with the body. If the hammock be retained, it should be smoked and thoroughly washed. Let the vessel, or sick-room, be frequently aired, and, on the death or recovery of a patient, fumigate the apartment in which he was confined by burning on a hot shovel or iron, nitre, or charcoal and sulphur. Sprinkle with hot vinegar, and whitewash the apartment, or scatter about the room chloride of lime.

GENERAL RULES

FOR THE TREATMENT OF DISEASES.

In many cases of illness, where the attack is not very severe, a proper attention to diet and habits is all that will be necessary. Abstinence from food and stimulating drinks, living on gruel and other liquid food, will give the system an opportunity to recover itself. In all cases of indisposition, especially attended with fever, the "antiphlogistic regimen," as it is called, ought to be observed. By this is meant the taking away of everything that may stimulate the system, or excite fever, so far as this may be done safely. Impressions upon the senses, particularly the sight and hearing, bodily and mental exertion, &c., must be guarded against as much as possible. The diet should be of the most sparing kind; barley water, thin Indian gruel, toast water, &c., with some acid, such as lemons, Cream of Tartar, (No. 10,) dissolved in it, or small doses of Nitre, (No. 50,) from time to time in water, to quench the thirst and cool the body. All animal food, and fermented and distilled liquors, should be withheld; the clothing must be light, the apartments must be well aired.

Rule i.

In every complaint, whatever it may be called, if you find the pulse quick, and strong,—head-ache,—tongue foul,—skin hot, or those marks which denote it of an inflammatory nature, remember the plan is to reduce it by bleeding,—purging,—low diet,—drinking plentifully of cold water and lemonade,—rest, &c.

Rule ii.

If, on the contrary, the pulse be small, soft, feeble and intermitting,—the tongue dark, and great debility or weakness is evident, reverse the whole plan; the diet must be generous and nourishing,—the bowels opened with *gentle* laxatives,—and the strength sup-

ported by bark, sulphate of quinine, wine and tonics of various kinds.

RULE III.

If in addition to those symptoms mentioned in the second rule, the tongue be covered with a black coat. —foul, dark looking sores form about the gums and insides of the cheeks—the breath be offensive, &c., the same class of remedies is to be vigorously employed, with a free use of acids and other antiseptic articles, or medicines, to prevent putrefaction.

RULE IV.

Severe local pains, as in the head, side, &c., require the use of the lancet, purging and blister to the part.

RULE V.

Incessant and earnest entreaties on the part of the sick, for any particular article of diet, *if steadily persevered in*, may be safely indulged, whether the use of it agrees or not with our preconceived ideas on the subject.

RULE VI.

In all fevers, where the pulse is quick, full, and strong, the skin burning to the touch, and there is no perspiration, dash cold water over the head and shoulders of the patient, wipe him dry, and put him to bed. If in consequence of this a chill be experienced, and the pulse sink, give warm wine, &c., and omit the water for the future. Should a pleasant glow over the whole frame follow the affusion, and the patient feel relieved by it, repeat it as often as may be necessary.

RULE VII.

Observe carefully the effects of various articles of food, as well as physic, upon your own body, and choose those which experience proves to agree best with you.

☞ Bathing the feet in warm water is proper and advantageous in all febrile attacks. It relieves head ache and assists in promoting perspiration.

MEDICAL PRACTICE.

The reader of this Manual will find various symptoms described as belonging to each disease, but he must not expect to find every symptom in every case of that disease he may be called to prescribe for. He must make up his judgment from the general symptoms. It is very rare that we find now a case of pleurisy with all the symptoms mentioned as belonging to that disease. It must not be supposed, that every attack can be accurately named. There are certain medical principles embodied in the "General Rules" of the previous page, that may be applied to a great many particular cases, where no particular name can be given to the disease.

OF THE PULSE.

The *pulse* is nothing more than the beating of an artery. There are two kinds of blood-vessels in the body: arteries and veins. The arteries carry the blood from the heart to the extremities of the body, where they are connected with the veins which bring it back again. An artery pulsates or beats; a vein does not. Every time the heart contracts, a portion of blood is forced into the arteries, which dilate or swell to let it pass, and then immediately regain their former size, until by a second stroke of the same organ, a fresh column of blood is pushed through them, when a similar action is repeated. This swelling and contracting of the arteries, then, constitute the pulse, and consequently it may be found in every part of the body where those vessels run near enough to the surface to be felt. Physicians look for it at the wrist, from motives of convenience.

The strength and velocity of the pulse vary much in different persons, even in a state of perfect health. It is much quicker in children than in adults; and in old

men it grows more slow and feeble, owing to the decreased energy of the heart. The pulse is increased both in strength and velocity by running, walking, riding, and jumping; by eating, drinking, singing, speaking, and by joy, anger, &c. It is diminished in like manner, by fear, want of nourishment, melancholy, evcessive evacuations, or by whatever tends to debilitate the system.

In feeling the pulse, then, in sick persons, allowance should be made for these causes, or what is better, we should wait until their *temporary* effects have ceased.

A *full, tense, and strong pulse*, is when the artery swells boldly under the finger, and resists its pressure more or less; if, in addition to this, the pulsation be very rapid, it is called quick, full, and strong; if slow, the contrary.

A hard, corded pulse, is that in which the artery feels like the string of a violin, or a piece of tightened catgut, giving considerable resistance to the pressure of the finger.

The soft and intermitting pulses are easily known by their names. In cases of extreme debility, on the approach of death, and in some particular diseases, the artery vibrates under the finger like a thread.

In feeling the pulse, three or four fingers should be laid on it at once. The most convenient spot to do this, as already mentioned, is the wrist; but it can be readily done on the temple,—just before, and close to the ear,—in the bend of the arm,—at the under part of the lower end of the thigh,—among the ham-strings, and on the top of the foot.

OF FEVER.

Fever is, by far, the most common complaint to which the human body is subject. It may be briefly described as a combination of heat, thirst, loss of appetite, weakness, and inability to sleep. It makes its appearance in two ways: either suddenly and violently, or gradually and gently. When it comes on in the first manner, a cold shaking, attended with sickness at the stomach, or vomiting, marks its access; the cold is more

severe than in the latter, as is also the pain in the head, and other symptoms. When its attack is gradual, a feeling of soreness over the whole body, such as is experienced after a hard day's work by one not accustomed to it, shows its approach. Nausea, pains in the head, chills, and more or less heat and thirst, soon follow.

As these symptoms vary infinitely in their degrees of violence, the vigor of the treatment to be pursued must differ accordingly. Thus the same directions that are given for simple inflammatory fever must be adhered to, in one whose symptoms are lighter, though similar, only there is no necessity for pushing them to so great an extent.

INTERMITTENT FEVER, OR FEVER AND AGUE.

There are three kinds of this disease. 1st—The Quotidian, the fits coming on in the morning of every day. 2d—The Tertian, commencing in the middle of the day, and returning every third day. 3d—Quartan, the fits coming on in the afternoon of every fourth day. The treatment of every form is so similar, that one general mode answers for all.

SYMPTOMS.—Intermittent fever begins with a sense of weakness, weariness, pulse small and quick, pain in the back and loins, head-ache and drowsiness, sometimes sickness of the stomach and vomiting, excessive chilliness and shaking. To these succeed great heat, the tongue is white and dry, pulse hard and strong; a profuse sweat terminates the fit.

TREATMENT.—In general an Emetic, (No. 1,) or a dose of Calomel and Jalap, (No. 2,) should commence the treatment. Then give, every three hours before the chill, a grain of Quinine, or the contents of one of the papers, (No. 48,) or a teaspoonful of Bark, (No. 11,) or one or two grains of White Vitriol, (No. 41,) in molasses, with a few grains of Cayenne pepper, or ginger, or cloves, or nutmeg. At the present time, physicians generally prefer Quinine, doses from three to five grains, and in African and other tropical fevers even larger doses still.

White vitriol is nearly as efficacious as quinine. It is best to commence its use in an emetic dose, and continue it in the dose of one or two grains, either with or without the spices, three times a day, to prevent the return of the fits. Weak tea of Boneset, (No. 49,) may be drank freely during both the cold and the hot stage, if there is no great febrile excitement. If the disease is not broken up at the first, the medicines must be continued as before; as soon as the sweating has subsided, except in the third or quartan form. Medicines need not be commenced in this variety until twelve hours before the expected attack of the chills.

A strong decoction of boneset in the dose of a wine-glass or more, or a few grains of Alum, (No. 43,) and powdered nutmeg, every three hours, will frequently cure the disease when the best remedies seem to have no power.

Some physicians prefer giving a single dose of five grains of quinine one hour before the chill. A Dover's Powder, (No. 46,) given in the cold stage, or half an hour after the hot fit commences, will frequently be found an effectual remedy. Bathing the feet in warm water, both in the cold and hot stage, relieves the head and shortens these stages.

REMITTING BILIOUS FEVER.

Symptoms.—This disease differs from the fever and ague, in having no regular intermission, and by a greater frequency of delirium. When the fever decreases in violence, as it does at a certain time daily, and goes off by a gentle moisture, and shortly after returns, the interval is called a remission.

Treatment.—If the patient is of a vigorous constitution, and full habit of body, the pulse full and hard, bleed to the extent of a pint, give an emetic of Ipecac., (No. 47,) mixed with one third of a paper or two grains of Tartar Emetic, (No. 1.) One hour after, give either a dose of Calomel and Jalap, (No. 2,) or ten grains of Calomel, (No. 3,) and follow the calomel three hours after with a full dose of Salts, (No. 8.) If the fever continues, give one of the Antimonial Fever Powders,

(No. 45,) in molasses, every three hours. Let the drink be cold water, lemonade, or a solution of Cream of Tartar, (No. 10.) Should pain in the head or side continue, with a full pulse and flushed countenance, more blood may be taken from the arm, and six or eight grains of calomel be administered, and worked off by salts or Castor Oil, (No. 12.) If much sickness of the stomach and vomiting is present, and not relieved by a mustard plaster, it may be necessary to apply a blister over the pit of the stomach. During the remissions, take a teaspoonful of Bark, (No. 11,) or from one to three grains of quinine every two hours. It is proper in all fevers to put the feet into warm water, and give a weak tea of Boneset, (No. 49,) and to keep the patient on a low diet, viz.: water gruel, Arrow-root, (No. 38,) toast water. The juice of acid fruits, oranges, roasted apples, and guava jelly, mixed with water, are useful. A very powerful means of subduing fevers is the application of cold water, salt or fresh. It may be dashed on suddenly from a bucket, or applied with a sponge or cloth, whenever the fever runs high, and the patient has no chilly sensation, and when he has no general or profuse sensible perspiration. From six to nine o'clock in the evening is usually the best time to apply the cold affusion. Under treatment, this disease is sometimes modified into intermittent fever; then it should be treated accordingly.

YELLOW FEVER.

Symptoms.—Begins with short chills and flushes of heat, but not often attended with shakings. Violent head-ache, pains in the back and limbs, great debility, sickness, and distress at the pit of the stomach ensue, with great redness and burning of the eyes. Vomiting soon comes on, which is apt to continue, and to end in vomiting a dark matter resembling coffee-grounds, called black vomit. A yellowness of the skin comes on soon, commencing under the ears and extending more or less over the surface. The tongue is at first furred and moist and trembling, but by degrees becomes black, or sometimes of a fiery red color.

Treatment.—Let the patient be covered with a blanket and take a dose of Calomel and Jalap, (No. 2,) or twenty to thirty grains of Calomel, (No. 3,) which follow in two or three hours by two ounces or half a gill of Castor Oil, (No. 12.) Let him drink freely of warm tea of Boneset, (No. 49,) or of sage or catnip, to promote sweat. Should the medicine be vomited, let the stomach be washed out by frequent draughts of the boneset tea. Calomel alone will often be kept down, when if combined with jalap it is rejected. An injection made by dissolving two large spoonsful of common salt and half a gill of molasses in a pint of warm water, should be administered and repeated, until the bowels are thoroughly evacuated. If great febrile excitement exists, and the patient has a vigorous constitution, the loss of a pint of blood at the very beginning of the attack may be desirable.

When the bowels are relieved, the patient should continue the warm drinks for the purpose of producing perspiration, upon which, in a great degree, his safety depends. Should the skin remain hot and dry, bathing the feet and legs in warm water, and drinking freely of warm lemonade, or boneset tea, will rarely fail to produce sweat. The sweat should be continued without intermission, until the patient is perfectly free from fever, which will generally be the case in forty-eight hours. Occasionally sponging the body with warm vinegar and water, or what is better, lime juice and water, will assist the sweating operations.

If the head is oppressed, a blister should be applied behind the ears or between the shoulders. If the stomach is disturbed by vomiting, with much anxiety and sighing, a blister should instantly be applied over the pit of the stomach. If this fails to relieve, dissolve a teaspoonful of saleratus in a tumbler of water, and give half a wine-glass every half hour. Porter will sometimes arrest this symptom, when other things fail.

While these means are used, the feet and hands should be kept warm by cloths dipped in hot vinegar and water, or spirits and water, frequently renewed. Plasters of mustard, meal and vinegar may be applied

to the wrists, and soles of the feet. In some instances blisters applied to the ankles or wrists have arrested vomiting, when other means failed.

The diet should be barley water, Indian gruel, arrow-root, &c., and when animal food is first used, soup is the best form, with a large proportion of rice, barley, and other vegetables.

The following mode has been found quite successful in the hands of a ship-master of my acquaintance:

He seats the patient in a chair, with a blanket wrapped around him and the chair, with the exception of his head, then sets some convenient vessel under the chair, containing half a gill to a gill of spirits, and sets it on fire. The steam of the burning spirits produces perspiration. A second cup may be burnt in the same way. The patient is wrapped in the blanket and put into bed. Warm teas or lemonade is given him, until free perspiration follows, and next morning half a tumbler of sweet oil. The bowels should be kept open through the course of the disease. Peruvian bark, in the dose of a teaspoonful, or half a wineglass of the decoction of bark, with 15 drops of Elixir Vitriol, (No. 14,) should be given every two hours as soon as a remission ensues. A Dover's Powder, (No. 46,) at night, produces sleep and perspiration.

The following, with slight alterations in the phraseology, is copied from the Philadelphia Medical Examiner. I presume that similar treatment in African fever would be followed by favorable results:

"When quinine is taken in large doses, medical men have observed that it produces but a slight and inconsiderable stimulating effect, which is succeeded within a few hours by a powerful sedative impression that is generally durable. With this view, the medicine is exhibited in one very large dose of from twenty to sixty or eighty grains, in the very beginning of the fever, while the morbid action appears in the process of formation, that is, within six or eight hours immediately after the appearance of the earliest symptoms. It is all important, if we understand the theory of its use, that the quinine should be employed before local irritation or

congestion has taken place, that is, while the malady is confined to the nervous system and the organization is yet unimpaired.

"When taken under such circumstances its first effects are a very slight increase of the febrile symptoms; the pulse perhaps becomes quickened, the breathing more hurried, and the usual consequences of stimulating medicines are presented. This condition is, however, but transient, and is promptly followed by corresponding depression. All the more violent symptoms subside, the temperature of the surface is lowered, pain diminished; the pulse is gentle and subdued, the skin is covered with a healthy moisture, sleep is brought on from which the patient awakes refreshed and substantially better, and within twenty-four or thirty-six hours is considered in a state of recovery. The treatment is of course not exclusively confined to the use of the quinine, though this is the chief remedy. The usual means of obviating tendencies to local irritation must be resorted to, as cupping, leeching, warm baths, blisters, and other local applications may be used according to circumstances.

"The quinine is administered in a single dose. The object is to bring about the sedative or quieting influence of the remedy before any other organs, as the head, stomach, &c., become specially affected. If it should fail to produce the anticipated effect, the case is too far advanced for a second trial, and it must be treated on general medical principles. Let it, however, be remembered, that in thirty or forty cases which have been subjected to this novel curative method, not one has terminated fatally. The action of the quinine has been uniformly most salutary, operating like a charm, and dissipating the symptoms of the malady before they have become concentrated on different organs."

INFLAMMATORY FEVER,

Is a species of fever that rarely occurs in warm climates, but is peculiar to cold and temperate climates.

Symptoms.—It attacks with the usual symptoms of other continued fevers, and is shortly followed by red-

ness of the face and eyes, great restlessness, intense heat, unquenchable thirst, oppression of the breathing, and sickness of the stomach. The skin is dry and parched, the tongue is of a scarlet color at the sides, and furred with white in the center, urine red and scanty, the body is costive, there is a quickness, fullness and hardness of the pulse, not much affected by any pressure upon it.

TREATMENT.—The treatment must be very decided, blood must be taken from the arm from a large orifice to the extent of a pint or a pint and a half. Should the inflammatory symptoms continue, repeat the bleedings. Give full doses of Epsom Salts, (No. 8,) or a tablespoonful heaped of Cream of Tartar, (No. 10,) in a tumbler of cold water. When the system is somewhat reduced, give fifteen grains of Calomel, (No. 3,) instead of salts, as a purgative. Dissolve two grains or one-third of a dose of Tartar Emetic, (No. 1,) in half a pint of water, and give a tablespoonful every two hours, or 6 grains of Fever Powder, (No. 45,) to relieve fever and produce sweat. Cloths dipped in cold water or vinegar should be applied to the head, a blister to the nape of the neck, and mustard plasters to the feet. If the liver or the lungs, or any other organs, should be particularly attacked, let a blister be applied over the parts. The patient should be kept as cool and quiet in body and mind as possible, and take the lightest diet. The bowels should be opened every day, and the course directed above continued until a crisis takes place.

TYPHUS, OR SLOW NERVOUS FEVER.

A species of continued fever characterized by great debility, a tendency of the fluids to putrefaction, and the ordinary symptoms of fever. It is readily distinguished from the inflammatory by the smallness of the pulse, and by the sudden and great debility which ensues on the first attack.

The most general cause is supposed to be contagion, but it may be occasioned by the effluvia arising either from animal or vegetable substances in a decayed or putrid state. A want of proper cleanliness, and con-

fined air, are likewise causes of this fever; hence it prevails in hospitals, jails, camps, and on board of ships, especially when such places are much crowded, and the strictest attention is not paid to free circulation of air, and due cleanliness.

Symptoms.—On the first coming on of the disease, the patient is seized with languor, dejection of spirits, great depression and loss of strength, universal weariness and soreness, pains in the head and back and extremities, and chills. The eyes appear full, heavy, yellowish, and often a little inflamed; the temples throb violently; the tongue is dry and parched; the breathing commonly laborious, with deep sighing; the breath is hot and offensive; the urine pale, the bowels costive, and the pulse is usually quick and small, and hard, and now and then fluttering and unequal. Sometimes a great heat, load and pain is felt at the pit of the stomach, and vomiting of bilious matter ensues. The pulse in progress of the disease increases in frequency from 100 to 130; there is a great debility, great heat and dryness of the skin, oppression of the breast, with anxiety, sighing and moaning; the thirst is greatly increased, the tongue, mouth, lips and teeth are covered over with a brown or black fur, the speech is inarticulate and scarcely intelligible, the patient mutters much, and delirium ensues. Other dangerous symptoms, not necessary to mention, here come on, until death closes the scene. Every case does not present all these symptoms, nor all so violent, as here described. Some cases are of a very mild character.

Treatment.—In the very early stage of typhus fever, it may possibly be cut short at once, but where it has become seated, our remedies must be directed to palliate its violence until its course is run. To this end if there is much fever, give an Emetic, (No. 41,) as directed under that head, until vomiting occurs. If the patient is feeble, give an Emetic of Ipecac., (No. 47,) in the dose of thirty or forty grains taken at one draught. Within an hour give ten grains of Calomel, (No. 3,) followed in four or five hours with a dose of Salts, (No. 8,) in cold water or a tablespoonful of Cream of

Tartar, (No. 10:) let the "*anti-febrile regimen*," for an account of which see "General Rules," page 35, be adopted through the course of this and every other fever. When the skin is uniformly very hot and dry, cold water should be either dashed upon the whole body or applied with a sponge over the whole surface. Let the patient be kept as quiet as possible, both in mind and body. His diet should be barley water or other mild liquid, thin arrow-root or Indian gruel. Cream of Tartar dissolved in water and sweetened a little, or lemonade, may be freely used. Twenty grains of Nitre, (No. 50,) or a teaspoon even full may be divided into two doses, each dose may be dissolved in a wine-glass of cold water and drank immediately, and repeated every two or three hours. Let the clothing be light. A Dover's Powder, (No. 46,) may be administered at night to procure sleep and promote perspiration. Spirits of Nitre, (No. 20,) may be given every three hours, a teaspoonful in a little toast water or cold water. The bowels should be kept open daily by a moderate dose of salts or rhubarb, or by injections.

If under these means the system appears to be sinking, a more nutritious diet must be used with a moderate quantity of wine, Peruvian Bark, (No. 11,) or Quinine, (No. 48.) Not over half a pint of wine in a day need be taken, and may be given in the form of sangaree. A wine-glass of the decoction of bark (see *Recipes*,) once in three or four hours, according to the urgency of the case, 10 or 15 drops of Elixir Vitriol, (No. 14,) may be added to the decoction. The patient may use freely the juice of ripe fruits of tropical climates, roasted apples, &c. If white specks or small sores in the mouth appear, a gargle may be made by adding about a teaspoonful of elixir vitriol to a tumbler of water sweetened, which may be applied by a small swab to the mouth and back parts of the throat.

If the disease inclines more to the nervous form, with much anxiety of mind, tremors and spasmodic twitching of the muscles, give one teaspoonful of Ether, (No. 21,) and Dover's powder, (No. 46,) in the dose from 10 to 20 grains once in 6 or 8 hours. The ether

may be repeated every two or three hours. Half a teaspoonful Spirits Camphor, (No. 26,) and twenty drops of Spirits Hartshorn, (No. 17,) may be added to the ether. It will be found useful, also, sometimes to apply warm water in bottles to the feet, and mustard plasters upon the inside of the ankles and wrists. It will be always right to shave the head, and keep it cool by cold water or spirits and water, and to apply a blister to the back of the neck. If a diarrhœa comes on, give Dover's Powder, or small doses of Ipecac., [see *Ipecac.*,] (No. 47.) In profuse sweats, administer decoction of bark and elixir vitriol, or the mixture of ether, hartshorn and camphor, mentioned above, every hour.

The decoction of bark and elixir vitriol may be used as the patient recovers, three times a day, to restore strength, intermitted sometimes for Bark Bitters, (No. 25.) Care should be taken when the patient is recovering, that by no exposure to weather, excess in diet or exertion, a relapse is brought on. Boneset or chamomile tea may be given at any period of the disease, and are useful both in preserving the strength of the system, and the organs of digestion.

Clean clothes and washing the body with cold water are very important means of cure. The free use of cold water is to be allowed in all fevers.

SCARLET FEVER.

Symptoms.—This disease commences with the usual symptoms of fevers, and may be distinguished from measles, which it sometimes resembles, by the absence of cough, watery eye, running at the nose, and sneezing. The thirst is considerable, the skin dry, and the disease attended with nausea and vomiting. It commences sometimes with vomiting. About the third day the scarlet efflorescence or eruption appears, which is usually out only three or four days, and covers the body with one universal redness.

Treatment.—Commence with a dose of Tartar Emetic, (No. 1,) followed by a dose of Epsom Salts, (No. 8).

Sponge the whole body when hot with cold water, and repeat the sponging as often as the heat rises. Where the heat is excessive, take the patient out of bed, and dash on a bucket of fresh or sea water. Let an Antimonial Fever Powder, (No. 45,) be given every three hours, or the solution of tartar emetic every two hours, a tablespoonful as mentioned under the head of pleurisy. Should the throat be much inflamed and swelled, leeches, if they can be procured, must be applied, 2 or 3 to each side of the throat. Volatile Liniment, made by mixing equal parts of Hartshorn, (No. 17,) and Sweet or Castor Oil, (No. 12,) should be rubbed upon the neck several times a day. The inside of the throat may be swabbed frequently with water, made pretty sour with Elixir of Vitriol, (No. 14.) Should the disease exhibit a typhus or sinking character, with ulcers in the throat of a dark color, it will be necessary to support the system with nutritious diet, with a moderate quantity of wine, decoction of bark, (see *Recipes*,) or Quinine, every two hours, with ten or fifteen drops of elixir vitriol. The bowels should be opened daily.

SMALL POX.

Is of two kinds, the distinct and the confluent. The eruptions in the first are separate; in the latter they run into one another.

Symptoms.—The first form commences with redness of the eyes, soreness of the throat, pains in the head, back and loins, weariness and faintness, chilliness, heat, thirst, sickness of the stomach, and a quick pulse. There is also a peculiar feeling of distress at the pit of the stomach. Children are often attacked with a fit, and I have seen one case myself of an adult who was attacked thus.

About the third or fourth day from the first attack, the eruption begins in little red spots on the face, neck and breast, and these continue to increase in number and size for three or four days, when they will be dispersed over several parts of the body. About the fifth or sixth day the matter begins to form, at which time a small vesicle, containing an almost colorless fluid, may

be observed on the top of each pimple. About the eighth or ninth day the vesicle will be filled with a thick yellow matter. Other symptoms which need not be enumerated here succeed in the course of the disease.

TREATMENT.—If the patient is a person of good constitution and full habit of body, from 12 ounces to a pint of blood may be taken from the arm. An Emetic, (No. 1,) if there is no particular tenderness of the stomach, should be given. The feet may be bathed in warm water, and two large spoonfuls of Salts, (No. 8,) should be given, followed every three hours with a Fever Powder, (No. 45.) This course will have a tendency to prevent swelling and pock upon the face. The foot bath may be repeated if there is much affection of the head and face at any time, and mustard plasters applied to the feet unless they are dropsical. The body should be kept cool; the drinks may be cold lemonade or a solution of Cream of Tartar, (No. 10,) slightly sweetened; the bowels should be kept open daily by one or two teaspoonfuls of Sulphur, (No. 9.) Small quantities of Nitre, (No. 50,) may be dissolved in a tablespoonful of cold water, and taken immediately once in three hours. To relieve the throat, a gargle, made by rendering water pretty tart with Elixir Vitriol, (No. 14,) will be proper, and also the breathing of the vapor of warm water or vinegar. The pustules, when filled, should be opened with a sharp pointed instrument, over the whole body, and the matter sponged away with warm water. It may be necessary to repeat this operation when the pock fill again.

Should the small pox occur in a family, or on board ship, the persons exposed should prepare their systems for a mild attack, by cooling purges and a light diet.

The diet of the patient should be of the lightest kind, and all the means of lessening fever should be tried. When the pustules begin to scab, the patient may be pretty freely purged.

Sometimes the pulse sinks, the pock do not rise or are filled with a thin watery or bloody fluid, the skin becomes purple. Then make free use of wine, decoc-

tion of bark, combined with 10 or 15 drops of Elixir Vitriol, (No. 14.) A teaspoonful of Ether, (No. 21,) may be added to the wine once in two hours, until the system rallies. A teaspoonful of Spirits of Camphor, (No. 26,) may be administered with 12 drops of Hartshorn, (No. 17,) every three hours in half a wine-glass of water. The scabs may be kept soft with Sweet Oil or with the Cerate, (No. 29.) If blood flows from the gums, bowels, or the stomach, use a weak solution of Alum, (No. 43.) The same may be applied to the eyes to prevent loss of sight. In the second or confluent form, the stomach and bowels should be evacuated, and means used to moderate the fever as in the other form. Ipecac., (No. 47,) is a more suitable emetic than the Tartar Emetic, (No. 1,) and where the system seems to sink it must be supported by the decoction of bark and the elixir of vitriol every four or six hours, and a Dover's Powder, (No. 46,) every eight hours. When alarming convulsions occur, 40 to 60 drops of Laudanum, (No. 16,) must be given. If there is diarrhœa, it must not be wholly stopped. If the pustules should flatten, proceed as mentioned above, and other symptoms mentioned under the first variety should be treated as there directed.

MEASLES.

Symptoms.—Are known by hot fever, hoarseness, dry cough, sneezings, drowsiness, watery eyes, and redness of the eyes. About the fourth day there is an eruption of small red points, discernible by the touch, which after three days go off, commencing at the head and going towards the extremities.

Treatment.—Let the patient's bowels be moved by Epsom Salts, (No. 8,) or some other mild physic. Should there exist no threatening symptoms, the patient needs but little more than to avoid both heat and cold, drink freely of tea of Flaxseed, (No. 37,) and to keep his bowels open.

Should the patient be of a robust habit, and full of blood, with considerable affection of the breathing, from three gills to a pint of blood may be taken from

the arm. An emetic of Ipecac., (No. 47,) combined with two grains, or one-third of a dose of Tartar Emetic, (No. 1,) will often relieve this symptom, and throw the measles out upon the skin. Should there be pains in the chest, bleeding must be resorted to, and the treatment mentioned in pleurisy follow. The solution of tartar emetic mentioned above, with the flax-seed tea, should be given every two hours, unless the disease is of a sinking character, when the tartar emetic should be omitted. A blister may be applied as directed in pleurisy, after bleeding, if pain in the chest continues. Care should be observed, as the measles go off, to avoid exposure to cold, as the lungs are left in an irritable state. Should the eruption leave the surface, the warm bath should be administered, and other gentle means to promote perspiration. A gentle emetic of ipecac, will sometimes alone effect this.

ERYSIPELAS, OR ST. ANTHONY'S FIRE.

SYMPTOMS.—Fever, delirium, vomiting, pulse strong or weak as the fever inclines to the inflammatory or typhus kind,—on the fourth day, sometimes on the second or third, the skin in some one part becomes red and inflamed, which is soon extended to others,—the parts affected being swollen and of a bright scarlet. If the face is attacked, it spreads itself on the scalp, and the eyelids sometimes swell so as to prevent the patient from seeing,—after a longer or shorter period, the eruption ends in small watery vesicles, or blisters, or in branny scales. At this period, the fever sometimes abates, at others, drowsiness or delirium comes on, which increases it, and destroys the patient by the eleventh day.

CAUSES.—Cold, excessive heat, intemperance, acrid bile, or other irritating matter in the stomach and intestines.

TREATMENT.—On its first appearance give an emetic of Ipecac, (No. 47,) and after its operation, six or eight grains of Calomel, (No. 3,) followed in about two hours by a dose of Epsom Salts, (No. 8,) until the bowels are well emptied. The surface affected may be

covered with scorched flour. A narrow blister, covering partly the sound and partly the diseased surface, wherever the plaster can be applied, will ordinarily check the extension of the disease. If erysipelas attacks the limbs, the blister should surround the part affected. Lunar caustic if it can be procured, should be moistened, and drawn over the sound and diseased surface about an inch in width. Diluting drinks, such as lemonade or a solution of cream of tartar, barley-water, &c., should be given. Stimulating food and drink must be avoided.

If the disease continues to increase after the bowels are moved, give a teaspoonful of powdered bark (No. 11,) once in an hour until the inflammation is lessened, or if you have not the powdered bark, a grain of quinine, (No. 48.)

Erpsipelas sometimes attacks a wound, which immediately puts on a very alarming appearance. The sore spreads, the surrounding skin becomes hot, painful and red, and the patient becomes feverish. A fermenting poultice, made by pouring yeast upon an ordinary poultice, spread thick, should be applied to the wound. To prevent the erysipelas from spreading, the blister or lunar caustic should be employed as before directed. As the bad state of the wound proceeds from constitutional disturbances, the state of the constitution should be attended to.

During the first attack of the disease, the bowels must be kept free, the diet should be low, and if the pain be great, give a teaspoonful of Spirits of Nitre, (No. 20,) and ten drops of Laudanum, (No. 16,) in a tablespoonful of water, and repeat the dose in three hours if necessary. As soon as the matter begins to escape, or should there be the least appearance of *mortification*, which will be known by the dark color of the part and the bad smell, the whole treatment should be changed. The diet should be of the most nourishing kind and a free allowance of wine and porter permitted. A grain of opium, or twenty drops of laudanum, if solid opium is not to be procured, must be given every two hours, and also a teaspoonful of Pe-

ruvian bark, (No. 11,) or a grain of Quinine. Matter should not be allowed to burrow, but be discharged by very free openings. The bandages should be carefully changed twice a day. The patient should be kept quiet, free from company, and his bed cool and dark.

The following is from a Medical Journal published in England, and is worthy of a place here:—"M. Velpeau declares that, having frequently failed with the usual remedies employed against this malady, a new idea suggested itself to him from a consideration of the modifications produced upon the blood by the preparations of iron. He was thence led to employ as a local application, a solution of the Sulphate of Iron (copperas), in the proportion of one ounce to a pint of water, or an ointment containing two drachms to an ounce of lard. The ointment he considers a more convenient application for the head, neck and trunk. Great care is requisite, however, in thoroughly powdering the copperas, before mixing it with the lard. It should then be rubbed freely over the whole inflamed surface and even a little beyond. The solution is to be employed by folded linen or muslin, moistened every six hours and maintained on the part by means of a bandage.

The skin must be kept constantly moist. One of the inconveniences of the copperas is that of reddening the linen with which it comes in contact. Velpeau states that in twenty-four cases, in which he employed this application, the most marked and rapid influence was exerted over the eruption. In no instance did the same spot of inflammation resist this means more than twenty-four or forty-eight hours.

NETTLE-RASH.

This disease is sometimes called the hives, and also improperly erysipelas. It attacks with some fever, and is followed by an eruption of white or red blotches, resembling the stinging of nettles. The blotches usually come out suddenly, especially if the skin be rubbed or scratched, and are attended with itching and burning. They seldom stay many hours in the same

place, sometimes not many moments. No part of the body is exempt from them. Where many of them rise together and continue an hour or two, the parts are often considerably swelled, especially the arms, face and hands. These eruptions will continue to infest the skin sometimes in one place and sometimes in another for one or two hours together. This may occur several times a day. In some constitutions this disease lasts only a few days, in others months.

Causes.—Some particular kinds of food, as lobsters and other shellfish, a disordered state of the digestive organs. It is not always that we can assign a cause for the disease.

Treatment.—Any cooling purge will be found useful, as salts, (No. 8,) cream of tartar, (No. 10,) two tablespoonsful of either in a half tumbler of water. Should this not carry off the eruption, give a blue pill, (No. 7,) at night and a dose of rhubarb and magnesia in the morning. This may be repeated two days afterward. A warm bath in connection with the medicines is always an appropriate remedy.

INFLAMMATION OF THE BRAIN.

Symptoms.—Intense pain in the head,—the eyes incapable of bearing the light,—delirium,—face flushed, —oppression at the breast,—the pulse hard, and very rapid,—tongue, at first of a fiery red, then yellow, brown, or black.

Causes.—Exposure to excessive heat of the sun,—blows on the head,—intense application to study,—intemperance.

Distinguish it *from inflammatory fever* by the pulse, which in the one is full, strong and regular; in the other, hard, quick and corded; and by the raving delirium. From typhus by the two latter marks.

Treatment.—Bleed the patient as quickly as possible, until he nearly faints. Upon the resolute employment of the lancet in the onset, we must place our chief dependence. The bowels should be freely opened with Epsom Salts, (No. 8,) the head shaved, and a blister, or cloths dipped in iced vinegar and

water, or pounded ice, be applied to it, the feet bathed at the same time in warm water, and the room kept perfectly *cool*, *dark and quiet*, and no company should be admitted. Rice water, lemonade, or cold water, is to be the only diet. Should the violence of the disease not give way to these remedies, repeat the bleeding, blistering, &c., as often as may be necessary. The most vigorous measures to reduce the inflammation are required, or death will be the consequence.

QUINSY, OR INFLAMMATORY SORE THROAT.

Symptoms.—Difficulty of swallowing and breathing, accompanied by redness and swelling of one or both the tonsils or almonds of the ears, as they are sometimes called, dryness of the throat, foulness of the tongue, sharp pains in the parts, and some fever. As the disease advances, the swallowing and breathing become more difficult, the speech is very indistinct, the dryness of the throat and thirst increases, the tongue swells and is covered with a dark fur, the pulse is full and frequent.

Treatment.—Give an emetic, (No. 1,) followed by a dose of Epsom Salts, (No. 8.) Rub the neck well several times a day, with Opodeldoc, (No. 23,) mixed equally with Hartshorn, (No. 17.) Let the patient drink freely of weak tea of Boneset, (No. 49,) to promote perspiration. If the swelling increases, draw in the vapor of *warm* water through the muzzle of a teapot; care is to be taken not to scald the patient's throat and lungs by having the water too hot. Gargle the throat with a weak solution of alum, (No. 43.) Sometimes the swelling produces a complete stoppage of the throat even to suffocation. The vapor of Ether, (No. 21,) should be inhaled, or the swelled gland opened with a lancet.

PLEURISY.

Symptoms.—This disease comes on with a sharp pain in the side which is increased by a long breath. It is attended with flushing of the face, increase of heat, strong chills, difficulty of lying on the side affected,

hard dry cough at the first, sickness of the stomach, the pulse strong and frequent, and feels under the finger like the stretched string of a violin.

Treatment.—Bleed the patient from a large orifice, until he can take a long breath with little or no pain. If the blood after standing a little time has a yellow crust upon the surface, or becomes cup shaped, it will be necessary probably to take blood again. Let two grains, or one-third of an Emetic Powder, (No. 1,) be dissolved in a tumbler of water, and give the patient a tablespoonful every hour to relieve cough and fever, and let him drink freely of flaxseed tea. A dose of salts should be administered immediately after bleeding. A blister should also be applied over the seat of the pain. Should the pain continue, and the pulse be hard, more blood should be taken, and in general, so long as the yellow coat appears upon the blood, bleeding is necessary. As the symptoms subside a Dover's Powder, (No. 46,) at night, will be useful. Let the diet be toast water and gruel, as long as the fever continues, or the pulse is hard. Should cough remain, use the cough drops. [See *Recipes*, p. 30.]

INFLAMMATION OF THE LIVER,

OR LIVER COMPLAINT.

Symptoms.—This disease appears in two forms, the acute and the chronic. The acute comes on with sharp pain under the short ribs, extending up to the collar-bone and shoulder, which is increased by pressing the parts on the right side over the liver, and is accompanied by cough, oppression of breathing, difficulty of lying on the left side; the urine is of a deep saffron color, and small in quantity; great thirst, costiveness, with strong, hard and frequent pulse; and after a few days the skin and eyes become of a deep yellow.

Treatment.—If the symptoms are severe, and the constitution good, a full bleeding will be necessary; 15 or 20 grains of Calomel, (No. 3,) should be administered, followed by two tablespoonsful of Salts, (No. 8.) A large blister should be applied to the right side, over the pain. If the bowels should not be freely opened,

give a dose of Calomel and Jalap, (No. 2.) Two Mercurial Pills, (No. 7,) should be taken at night, and one in the morning, until the mouth is a little sore. Give a Dover's Powder, (No. 46,) night and morning.

The chronic species is usually accompanied with a sallow complexion, loss of appetite and flesh, costiveness, indigestion, flatulence, pains in the stomach, a yellow tinge of the eyes, clay-colored stools, high-colored urine, depositing a red sediment and ropy mucus; a dull pain in the region of the liver, extending to the shoulder, and sometimes with considerable asthma. Give calomel and jalap and the mercurial pills as directed above. A blister should occasionally be applied to relieve pain. Keep the bowels open by Rhubarb, (No. 4;) keep up the strength by nutritious diet, and give a teaspoonful of the Bitters, (No. 25,) three times a day in water.

If an abscess, or swelling containing matter, points outwardly, apply bread or flaxseed poultices to the swelling, omit the mercurial pills, and use wine, infusion of bark (see *Recipes*,) freely, and a generous diet. As soon as matter is felt within it, open it at its lowest and most projecting part with the point of a lancet, and let out its contents *very slowly*, taking care not to close the wound until this is completely effected.

JAUNDICE.

Symptoms.—Languor, loathing of food, a bitter taste in the mouth, vomiting, the skin and eyes of a yellow color, the stools clayed, and the urine giving a yellow tinge to rags dipped in it. There is a dull pain in the right side under the last rib, which is increased by pressure. When the pain is severe there is fever, the pulse is hard and full.

Treatment. In general 6 or 8 grains of Calomel, (No. 3,) should be administered at night, followed next morning by 15 grains more, or by a dose of Calomel and Jalap, (No. 3.) This course may be repeated the second night after. Should the disease not give way, give one of the blue pills, (No. 7,) every night, or rather half a pill night and morning.

Sometimes, an Emetic, (No. 1,) will be found necessary to rouse the bilious system in the first stage and afterwards. Spirituous liquors are at all times to be abstained from, but especially in this disease.

INFLAMMATION OF THE BOWELS,

Comes on with sharp pains over the whole belly, but more especially around the navel, accompanied with belchings, sickness of the stomach, vomiting of bilious matter, obstinate costiveness, thirst, heat, great anxiety, and a quick, hard, and small pulse. After a short time the pain becomes more severe, the bowels seem drawn together by a kind of cramp, every part of the belly is very painful to the touch, and seems drawn into lumps; great costiveness prevails, and the urine is passed with great difficulty and pain. The inflammation continuing to proceed with violence, ends in mortification; or, abating gradually, the patient recovers. Mortification has taken place when the pain ceases suddenly, with sinking of the pulse, shrinking of the features, and swelling of the belly.

Inflammation of the bowels should be distinguished from cholic: in the former, the pain is increased by pressure upon the belly, while in cholic it is relieved by it.

Treatment.—Bleed as freely as the strength of the patient will allow. Put the patient in a hot bath if possible, or if that cannot be done, apply hot fomentations to the belly. If leeches can be procured, two dozen may be applied over the belly, and a large blister be applied over the whole. It is very important to cleanse the bowels by a large laxative glyster, (see *Recipes*,) repeated until the bowels move freely. An ounce of Castor Oil, (No. 12,) may be given every hour until it operates, or a tablespoonful of Epsom Salts, (No. 8,) in the same way. If this disease has been preceded by costiveness, 15 or 20 grains of Calomel, (No. 3,) will be necessary. The diet should be of the lightest kind—the bowels should be kept open by gentle

means—avoid exposure to cold, or anything else likely to bring on a relapse.

☞ *Remember that this complaint frequently runs its course in a day or two, and that unless the lancet be fearlessly employed in the very beginning, mortification and death ensue.* If a strangulated rupture occasion the disease, the same, and if possible, still stronger reasons exist for bleeding, previous to any attempt to replace it.

RHEUMATISM.

Symptoms.—The acute form attacks with the ordinary symptoms of fever, which are soon followed by excruciating pains in different parts of the body, particularly in the large joints, shifting from one part to another, leaving a redness and swelling in every part they have occupied, as likewise great tenderness to the touch. Towards evening there is an increase of fever, and during the night the pains are more severe.

Treatment.—Bleed the patient freely, give him fifteen grains of Calomel, (No. 3,) followed in three hours by a tablespoonful of Sulphur, (No. 9,) and a Dover's Powder, (No. 46,) in molasses, with one of the Antimonial Powders, (No. 45,) after the bowels have been opened. If relief is not obtained, bleed again, and repeat the remedies. The feet may be bathed in warm water, and the Dover's Powder repeated every six hours, the antimonial powder every three hours, or two grains of tartar emetic, or one-third of one of the Papers, (No. 1,) may be dissolved in half a pint of water, of which one or two tablespoonsful may be taken every two hours through the course of the disease. When the fever is removed, and nothing remains but the pain and swelling, rub the parts well with Opodeldoc, (No. 23,) and take a teaspoon even full of sulphur three times a day. The most satisfactory remedy for rheumatism that I have ever used is the hydriodate of potash, one drachm dissolved in a pint of water, dose, half a wine glass three or four times a day. It may be increased to twice that quantity. A well

made decoction or syrup of Sarsaparilla may be combined with it to render it more effectual.

VOMITING,

Arises from various causes; sometimes from a disordered or overloaded stomach, improper diet, &c. Vomiting is often a symptom of some particular disease. When it comes on without fever or other disturbances, the treatment mentioned in cholera morbus is appropriate. If the matter thrown up is acid, a teaspoonful of saleratus, magnesia, or supercarbonate of soda in half a tumbler of cold water will frequently check vomiting at once. Ten or fifteen grains of calomel, (No. 3,) taken in a pill or a very small quantity of molasses, often quiets the stomach instantly. Apply a plaster of mustard or black pepper to the pit of the stomach, or if neither are at hand, wring out cloths in hot water and lay them to the stomach. Sometimes the most speedy remedy is an emetic of Ipecac., (No. 47.)

DIARRHŒA, OR LOOSENESS.

SYMPTOMS.—Frequent and copious evacuations by stool, generally with griping. Frequently there is sickness of the stomach, thirst, bitterness, and dryness of the mouth.

TREATMENT.—It is not safe, generally, to check the looseness with laudanum or binding articles, before the stomach and bowels have been emptied, but in that looseness which precedes Asiatic Cholera, it must be used immediately, in connection with the prescription of Rhubarb, &c., in the article upon Cholera Morbus. One of the best remedies is Ipecac., (No. 47,) given as directed under that head. Thirty grains, or a teaspoonful of Rhubarb, and two or three teaspoonsful of Magnesia, (No. 5,) with 30 or 40 drops of Essence of Peppermint, (No. 18,) and half a tumbler of water, should follow the ipecac. within one or two hours, or it may be given without using ipecac. at all. Let the patient drink freely of flaxseed tea, or barley water. When the bowels have been evacuated, give fifteen grains of

Dover's Powder, (No. 46,) or 25 or 30 drops of Laudanum, (No. 16.) If the stools are white or clay-colored, add ten grains of Calomel, (No. 3,) to the Rhubarb instead of magnesia. At any time after the bowels have been moved by the above, give the tonic solution of zinc and alum, (see *Recipes*,) a teaspoonful every three or four hours. If there is no fever, a Dover's Powder may be given every six or eight hours. The tonic solution may be continued three times a day to prevent a relapse, and to give strength and appetite. Should the disease seem to arise from acidity of the stomach, a teaspoonful of saleratus or super-carbonate of soda, dissolved in a tumbler of water, and used freely, will be found serviceable. Should the stools continue light or clay-colored, a Blue Pill, (No. 7,) should be taken at night, for three or four days. Perspiration excited by gentle means is very serviceable in this disease, as well as in dysentery. The diet of the patient should be carefully attended to, and consist of such articles as arrow root, sago, rice, &c.

The chalk mixture mentioned in a previous chapter is an excellent remedy in almost every case, especially after the bowels have been moved by cathartics and fever has subsided.

In that form of diarrhœa with which the late emigrants from Europe have been afflicted, a ship-master directed a tablespoonful of wheat flour stirred up with cold water to be administered and repeated two hours afterward. This treatment was successful in more than fifty cases.

DYSENTERY.

Symptoms.—Severe griping, often preceded by loss of appetite, sickness of the stomach, costiveness and chills—frequent inclinations to go to stool, heat and irritation of the fundament. The stools are sometimes slimy, sometimes bloody. Hardened lumps sometimes pass with the slime, when temporary relief follows. Some patients discharge a film of hardened mucus, like the scrapings of the intestines. Violent straining at stool, the patient feels a bearing down as if the bowels

were falling out; sometimes the gut does protrude. Great debility soon ensues with a quick and weak pulse.

Treatment.—Give Ipecac., (No. 47,) thirty grains. calomel, 15 grains, or the contents of one of the papers, (No. 3,) in molasses. If the pains are violent, give two grains of opium, or 40 to 50 drops of Laudanum, (No. 16,) mixed with ipecac. and calomel. Drink freely of barley water, flour gruel, or of Arrow Root, (No. 38,) or of tea of Flaxseed, (No. 37.) Where great pain and inflammation exist after the stomach is cleared, a blister may be applied to the belly, or flannel cloths wrung out in hot water, and laid as hot as can be borne upon the belly, repeated as they cool, and 15 or 20 drops of laudanum given every hour in the patient's drink, until relief is procured.

Bleeding, in severe cases and vigorous constitutions, may be employed, but should not be generally resorted to. When great pain exists in the lower part of the belly, with frequent stools, administer injections of thin flour starch, or flaxseed tea, one gill, laudanum, a teaspoonful, blood-warm, which should be kept up as long as possible, and repeated as often as discharged. Twenty or thirty grains of calomel administered in such cases both relieve the pain and check the discharges, when smaller doses would have but little effect.

The chalk mixture described under the head of "Recipes" has long been a favorite remedy with physicians.

No solid food should be eaten; but toast-water or arrow-root may be taken freely. The soft part of a roasted apple, or other ripe fruit, may be allowed. At an advanced stage, when the frequency of stools seems to be from a weak state of the bowels merely, the following will be found excellent:—White Vitriol, (No. 41,) three drachms, or a tablespoonful, not heaped, and Alum, (No. 43,) one drachm, or a piece as large as a middle sized chestnut, and a pint of boiling water. Dose, a teaspoonful every four hours, or dissolve in a tablespoonful of water, as much white vitriol as it will

bear. To every teaspoonful, add five teaspoonsful of Laudanum, (No. 16,) and give to an adult 15 drops every four hours, increasing one drop daily. A dose of Castor Oil, (No. 12,) should precede it and be repeated every other day. It will be proper, at any time, to produce sweat by gentle means, such as bathing the feet, &c.

CHOLERA MORBUS.

VOMITING AND PURGING.

SYMPTOMS.—A frequent discharge of bile by vomiting or purging, with pain and distention of the stomach, thirst, great anxiety, cramps in the legs, cold sweats, and sometimes death in less than twenty-four hours.

CAUSES.—Exposure to excessive heat, sudden checking of perspiration. The disease most commonly occurs when hot days are succeeded by cool nights, in the latter part of July and August. It arises also from indigestible food, cucumbers, melons, poisons, stale provisions, shell-fish, especially lobsters.

TREATMENT.—If vomiting has not already evacuated the stomach sufficiently, give one of the doses, or thirty grains of Ipecac., (No. 47,) as directed. Generally, however, vomiting and purging has come on before medicine is administered. The best remedy I have ever known is the following:—

Rhubarb 60 grains, or two teaspoonsful.
Super-carbonate of Soda or Saleratus, a teaspoonful.
Cayenne Pepper, an even teaspoonful.
Strong Peppermint-water, half a pint.
Or strong Mint Tea.
Mix. Dose, a tablespoonful every half hour.

A pill of opium as large as a small dry pea, if at hand, is better than laudanum, as it can be seen if vomited up, but if not, give from 40 to 60 drops of Laudanum, (No. 16,) with Essence of Peppermint, (No. 18.) If the patient vomits it up, try it again. Apply a mustard or Cayenne pepper plaster to the pit of the stomach, and to the ankles or wrists, or flannels wrung

out in hot water to the stomach, and repeated as they cool. Drink freely of a solution of soda or saleratus in water. Sometimes 10 or 15 grains of calomel, either made into a pill with a very little molasses, or in powder, will remain upon the stomach when everything else is thrown up.

ASIATIC CHOLERA.

The limits of this work do not admit of any discussion of the various theories respecting the nature of this disease. It seems evident to me that the epidemic influence, whatever it may be, so acts upon the human body as to bring about a sort of hemorrhage or discharge of the watery portion of the blood.

Symptoms.—The attack commences with more or less looseness of the bowels, in general unaccompanied with pain, and is therefore apt to be unnoticed, or rather disregarded. This looseness varies in its duration from a few hours to several days, until the bowels are emptied of their ordinary contents. Then follows a thin fluid resembling rice-water. These last discharges are commonly of a violent character and frequent. Vomiting soon succeeds of a similar fluid, followed by cramps in the fingers, toes, legs, and arms, and sometimes apparently of every muscle of the body. Sometimes the cramps precede the vomiting. There is no bile in any of the discharges. The eyes sink in their sockets, lose their luster and expression, the nostrils are contracted, the hue of the face is first leaden, then livid, then of a dark deep bluish color. The skin looks soaked or parboiled, the abdomen contracts, and seems drawn almost to the spine, as if there was nothing in it, and the surface of the body is cold. The pulse becomes frequent and small, and ultimately imperceptible. The breathing continues with effort, and the ribs heave. The cramps subside, the action of the heart seems to stop entirely, so that its beating cannot be perceived even when the ear is brought close to the chest, and the breath becomes cold. The patient becomes stupid, is tormented with thirst, and complains of burning heat of the skin, although to the touch of others it is icy cold. Death gen-

erally follows. This is cholera as observed by the author in the epidemic of 1832 in the city of New York. In some countries, it is said that in many cases the pestilence prostrates without warning its victim.

TREATMENT.—*This disease must be cured in its first stage of diarrhœa with the least possible delay*, otherwise the patient will as it were bleed to death. The prescription in the previous chapter of rhubarb, soda, &c. may be modified by the addition of two teaspoonsful of laudanum, and given as there directed until two or three doses are administered, or twenty-five drops may be added to the first tablespoonful and omitted in the remainder. The patient should keep his body quiet in a horizontal posture. Should the looseness continue, let two teaspoonsful of laudanum be mixed with half a tumbler of water and be thrown up the bowels by injection, or the anodyne injection may be administered as described on page 31. I have repeatedly found that a diarrhœa which resisted the ordinary treatment has been immediately checked by twenty grains of calomel. In this disease, however, its operation should be followed immediately by twenty-five drops of laudanum. The anodyne or laudanum injection should be repeated as often as the bowels move. In extreme cases the laudanum may be increased to a tablespoonful. Should cramps and vomiting ensue, give immediately a large spoonful of the rhubarb and soda mixture mentioned above. If thrown up it may be repeated, or the following mixture given.

Laudanum,	(No. 16)	60 drops.	Mix with two large spoons of water and give immediately.
Hartshorn,	(" 17)	40 do.	
Peppermint,	(" 18)	one teaspoonful.	
Sulp. Ether,	(" 21)	one do.	
Spts. Camphor,	(" 26)	one do.	
Tinct. Cayenne Pepper,		one do.	
Or Cayenne Pepper,		5 grains.	

If the patient throws up these doses, repeat at once. In the epidemic of 1832 I was accustomed to follow this last prescription by thirty grains of calomel. In the only case I have had in the present epidemic, I adopted successfully the same treatment, yet if the disease prevalent was of a less violent character, I should

prefer to rely upon the above stimulant remedies. Let the patient without delay receive a thorough friction over the whole surface of his body with cayenne pepper moistened with alcohol or common spirits, or mixed with oil, until the skin is reddened by the irritation. Mustard may be substituted if the pepper is not at hand. Mustard plasters may also be applied to the stomach and bowels and to the inside of the wrists and ancles. Bathing the feet and legs in warm water produces a happy effect. If the patient is thirsty he may swallow freely cold water, ice-water, and ice itself, to restore to the blood what it has lost in the watery discharges. After his thirst is somewhat abated, let him drink freely also of chicken or mutton tea.

In the third stage in which from the loss of fluids the patient becomes blue, or is in what is called the "collapse," it is exceedingly difficult to determine upon a hopeful course of treatment. The free use of ice and cold water internally, with the application of external heat by flannels wrung out in hot water, warm poultices, bags of hot sand placed beside the patient, and in some cases even the warm bath, seem to be indicated at this stage.

The last or congestive stage is that of reaction or fever. Here there is great danger that some important organ, especially the brain, will suffer. This is to be relieved by three or four leeches to each temple, cold applications to the head, at the same time bathing the lower extremities in warm water. Mustard poultices should be applied to the inside of the ankles and wrists, and cooling drinks administered. Should excitement run high, bleeding will be demanded.

In the course of two or three days, supposing the case to recover, discharges from the bowels take place; they are then hard, and entirely without bile, or else they consist of black bile alone. The patient may then take ten grains of calomel and follow it with a small dose of castor oil, but its excessive action should be immediately checked.

Cautions and Preventives.—During the prevalence of this disease all persons should beware of excessive

exertion of body or mind. Every person in a community where the epidemic exists feels more or less of its influence, disturbing the digestive organs, rendering articles of diet ordinarily harmless unsafe, such as fresh fish, fresh pork, veal, beets, radishes, salads, cabbage. All acid fruits are to be used very sparingly. Fear and all depressing passions expose the subject to any prevalent epidemic, while cheerfulness is an excellent preventive. Avoid cold currents of air, and the sudden suppression of perspiration. Use no cathartic medicines, especially Epsom salts, without extreme necessity. After two evacuations stop the action of any cathartic by laudanum. This last caution should be regarded for at least ten or twelve days after a vessel leaves a port where cholera prevails. All excesses in diet or drink predispose to the disease. Do not procrastinate the use of the most efficient remedies at the least addition to the usual number of stools a day. The uncomfortable feelings of the digestive organs I have always found to be speedily relieved by a few grains of supercarbonate of soda in a little water.

CHOLIC.

Symptoms.—The most prominent and principal symptom is pain about the navel, violent shooting and twisting coming on in fits, during which the patient is disposed to bend down and press upon the bowels. Costiveness, sickness of the stomach, vomitings, bitter taste in the mouth, attend the disease. The pain of cholic is somewhat relieved by pressure, thus it may be distinguished from inflammation of the bowels, for which it may be mistaken. The latter will not admit of the slightest pressure.

Causes.—Cold applied to the surface of the body, especially to the feet and bowels; shell-fish, as clams, lobsters, and other food of difficult digestion; too great a quantity of bile, costiveness, long continued wind in the stomach and bowels, certain metallic poisons, as lead, copper, and newly painted sleeping rooms.

Treatment.—Let one teaspoonful of Ether, (No. 21,) 40 to 60 drops Laudanum, (No. 16,) one teaspoon-

ful of Spirits Camphor, (No. 26,) with a little sugar and water, be taken immediately. Solid opium is to be preferred if it can be obtained, for if it is thrown up it can be seen, but if laudanum is used it cannot be known whether it is rejected or not, and it will be unsafe to repeat the dose. Repeat the dose in half an hour if relief is not obtained. Apply hot fomentations to the bowels. As soon as the pain lulls, or vomiting ceases, give three of the purgative pills, (No. 6,) or a full dose of Castor Oil, (No. 12,) with a teaspoonful of Essence Peppermint, (No. 18.) If acid exists in the stomach, use freely a solution of soda or saleratus. If the symptoms become violent or continue, it will probably be necessary to take a pint of blood from the arm. Chamomile tea and Boneset will be found useful in all stages of the complaint. If the cholic proceed from lead, use freely castor oil, and full doses of calomel. When the bowels are evacuated, give the tonic solution (see *Recipes*) three times a day, a teaspoonful in water.

APOPLEXY.

In this disease the patient falls suddenly, without sense or motion, and lies in a sleep-like state. It is sometimes preceded by head-ache, giddiness, dimness of sight, loss of memory, faltering of the tongue in speaking, numbness in the limbs, nightmare, &c. The face appears flushed, swelled and puffed up, the veins of the head and neck are distended with blood, the eyes are fixed, the breathing laborious and attended with snoring.

Treatment.—Bleed immediately from a large orifice to the extent of a quart, if the senses do not return, apply ice or cold water to the head, and warm water or mustard poultices to the wrists and feet. As soon as he can swallow give a dose of calomel and jalap, fifteen grains of each, or one of the Papers, (No. 2,) in molasses, or four or five of the Pills, (No. 6,) followed by two or three tablespoonsful of Epsom Salts, (No. 8.) A blister may also be applied to the nape of the neck. The head of the patient should be elevated, and all the

ligatures removed from the neck. The bowels should be opened by the injection, (see *Recipes*) if the patient cannot take medicine by the mouth, and afterwards kept open by medicine. He must be very spare in his diet, and take no stimulating liquors.

STROKE OF THE SUN.

This proceeds from exposure to the sun's rays, and exhibits the same symptoms as apoplexy, commencing with ringing in the ears, &c., and must be treated by large and repeated bleedings, and in every other respect as directed for apoplexy.

EPILEPSY, OR FITS AND FALLING SICKNESS.

A liability to this disease utterly disqualifies a man for seafaring life, as he cannot venture aloft without the risk, amounting almost to a certainty, of falling a corpse upon deck, or he may be attacked while holding a light among combustible matter and set fire to the ship.

The attack is sudden; the patient falls down in convulsions with a peculiar scream; the pulse is suspended, or very irregular; the mouth is closed and frothy; the hands clenched; the eyes open and distorted; the face often becomes black and the tongue is thrust out. During the fit the limbs are strongly contracted, and the whole body twists and works convulsively, with such violence as to require three or four strong men to hold the sufferer. In a few minutes the fit abates but is shortly renewed. After three or four returns the patient sighs, and although continuing senseless, passes into a deep sleep; on awakening he has no recollection of what has occurred, but feels heavy and stupid.

The only thing to be attempted during a fit is to place the patient in a cool airy situation, with his head elevated, and to protect him from bruising himself; cold water should be thrown in his face. Any tight clothes about the patient should be loosened. A piece of soft wood should be placed between the teeth, if possible, to prevent his biting his tongue. If the fit is severe,

blood may be drawn at the earliest moment that it can safely be done.

In some instances it is preceded by pain in the head, unquiet sleep, noise in the ears, and a sensation of cold commencing in one of the limbs and creeping upwards until it reaches the head, when the patient falls into a fit. When the sensation of cold is first felt a string or handkerchief should be put tight around the limb, and twisted with a small stick kept in the string for the purpose. The tight pressure need not be continued more than a minute, and this simple apparatus may be so applied as to cause no impediment to labor. Patients have thus averted the fits for months, who without it were attacked three or four times a week. The author cured one case with the conium and iron pills mentioned in the chapter on Irritation of the Spine.

DELIRIUM TREMENS, OR HORRORS.

A disease occurring in dissipated habits.

SYMPTOMS.—One peculiar characteristic symptom of this disease is a great dread of impending evil, as being pursued by some one for the purpose of murder, by evil spirits, by snakes, or other reptiles. Sometimes the hair on the body is imagined to be covered by snakes, which the patient is continually trying to beat off.

TREATMENT.—If it is possible to administer an emetic, let the patient have a dose of 30 or 40 grains of Ipecac. (No. 47,) followed by a dose of Calomel and Jalap, (No. 2); in case the first cannot be administered, or even if it can, give a teaspoonful of Ether, (No. 21,) and 40 drops of laudanum, (No. 16,) in a little sugar and water, and repeat the Ether in fifteen to thirty minutes until the patient is quieted. If in one hour he does not sleep give 60 drops of laudanum. Half a grain of sulphate of Morphine is to be preferred to the laudanum. *The patient must sleep or die.* When the disease subsides give two teaspoonsful of Tinct. Bark, (No. 25,) in water three times a day.

NEURALGIC AFFECTION, OR IRRITATION OF THE SPINE.

This disease is exceedingly common, particularly among females. Though not ordinarily a dangerous disease, it is productive of a great deal of suffering. It has been greatly overlooked, and the symptoms ascribed to quite a variety of complaints, as the liver complaint, pleuritic attacks, and in one instance to inflammation of the bowels. It is partly on this account that the author has been led to give the symptoms, and his own successful treatment, in this book.

Symptoms.—These are exceedingly varied, but the following are the most prominent. Although the patient may look well in the face and have a clean tongue and a good appetite, he will complain of pain in the side, most frequently in the left, increased by taking a long walk, palpitation of the heart, shortness of the breath, shooting pains in the chest, bowels and limbs; sometimes the pain or soreness will be confined to one spot. One patient complained of a constant pain in her left breast and supposed she had a cancer. Sometimes there will be a numbness of some of the limbs, spasms or twitches in the arms. The author's first patient had long been afflicted with epileptic fits, but was perfectly cured. Some patients are affected with frequent vomitings when the affection is nearly opposite the stomach; almost all complain of a dull pain in the front of the head, some are affected only with severe and long continued head-ache. With many there is an uncomfortable feeling of the throat, or difficulty in swallowing. Sometimes female patients have complained of great tenderness of the vagina. Most persons who are afflicted with excessive nervousness will be found laboring under irritation of the spine.

Upon making pressure with the hand upon the back bone, beginning at the head and continuing the pressure downward to the extremity of the spine, the patient will complain of greater or less soreness of one or more of the joints of the back. In some patients the tenderness extends through the whole spine.

The author ventures to say that he has prescribed

for not less than five hundred patients with this disease, many of whom had suffered many things of several physicians and rather grew worse.

Causes.—This affection is common both to the rich and to the poor, to the laborious and the indolent. Over-exertion of the bodily powers, excessive uterine discharges, derangement of the digestive organs, feeble constitution, and occasionally great mental anxiety, seem to be occasions of this disease. Among females of a laborious life, irritation of the spine is very frequent and seems to arise from long continued hard labor.

Treatment.—Upon my first acquaintance with this disease, I used caustic issues over the spine, afterwards repeated blistering, administering internally a pill composed of three grains of the *sun-dried* extract of conium, and four or five grains of the oxide or carbonate of iron, three times a day, occasionally increasing the dose of the extract to six grains. I had pursued this course for several years, when a poor laboring woman applied to me for advice with this complaint. I directed blistering as usual, but she said that she could not afford to abstain from labor to be blistered. I advised her to try the pills alone, as possibly they might do her some good though they might not cure her. She seemed to do as well with the pills alone as others with the issues and blisters. For several years I have used no external remedies. In some cases connected with excessive menstruation or other forms of uterine derangement, I have added the use of Dewees' volatile tincture of guiac, (see Recipes,) with manifest advantage and also in several where there was no such derangement. I have never met with but one case of this disease where the above treatment did not cure the patient, and that case was greatly relieved. The disease may of course be expected to return with a repetition of the causes. In that form of neuralgia which attacks the face and head, and is called "tic doloreux," I have been uniformly successful with the extract of conium and iron pill.

☞ Be careful to obtain the *sun-dried* extract, as that made by boiling the plant is worthless.

BLEEDING FROM THE NOSE.

Apply ice water, or cold water, to the head, hot water and mustard plasters to the feet. Pulverize some Alum, (No. 43,) very fine, and blow it through a quill into the bleeding nostril. Take a dose of Purging Pills, (No. 6,) or of epsom salts, and let all tight clothes be removed from the neck. Avoid blowing the nose as much as possible. If these remedies fail, it will be better to lose a pint of blood from the arm than at the nose.

BLEEDING FROM THE LUNGS, OR SPITTING OF BLOOD.

Symptoms.—This disease is characterized by coughing up blood of a bright red color and frothy, preceded usually by heat or pain in the chest. Sometimes it is preceded by a sense of weight and oppression of the chest, a saltish taste in the mouth, a dry tickling cough, and some slight difficulty of breathing. Spitting of blood may come on without any previous symptoms, after bodily injury.

Treatment.—Swallow freely common salt, or two or three grains of Sugar of Lead, (No. 42,) with six or eight drops of Laudanum, (No. 16,) every half hour, or a few grains of Alum, (No. 43,) with fifteen drops of elixir vitriol in a wine-glass of water. None of these articles should be given at the same time with the sugar of lead, as they decompose and destroy its efficacy. Should there be a considerable raising of blood, it will be necessary to bleed at the arm also, to the extent of a pint or more. The patient should be kept as quiet as possible in body and mind; use cold drinks without stimulants of any kind. Should there be pain in the breast, apply a blister over the pain and use a spare diet. Ipecac., (No. 47,) in nauseating doses of from five to ten grains every half hour or hour, will generally check a profuse bleeding from the lungs, and from some other organs of the body almost immediately.

VOMITING OF BLOOD.

Symptoms.—A flow of dark blood from the stomach, preceded by a sense of weight and oppression in that

organ. The blood is generally mixed with particles of food, &c.

Causes.—Tumors pressing on the liver, blows, &c.

Distinguish it *from spitting of blood* by its dark color, and being mixed with food.

Treatment.—If the accompanying symptoms be inflammatory, bleed, and use some cooling purge; if otherwise, try twenty-five drops of Elixir Vitriol, (No. 14,) in a wine-glass of water, every hour, till the bleeding ceases, or a weak solution of alum, or a teaspoonful of the tonic solution, (see p. 26,) in a wine-glass of water. If the cause be a diseased liver, treat it accordingly.

HEMATURIA OR BLOODY URINE.

This disease is sometimes occasioned by falls, blows, bruises or some violent exertion, such as hard riding and jumping, but it more usually arises from a small stone lodged either in the kidney or in the passage from it to the bladder, which by its size or irregularity wounds the inner surface of the part it comes in contact with; in which case the blood discharged is most usually somewhat coagulated, and the urine deposits a sediment of a dark brown color resembling coffee-grounds.

A discharge of blood by urine, when proceeding from the kidney or from the passage to the bladder, is commonly attended by some sharp pain in the back and some pain in passing water, the urine which comes away first being muddy and high colored, but towards the close of its flowing becoming transparent and of a natural appearance. When the blood comes immediately from the bladder, it is usually accompanied with a sense of heat and pain at the bottom of the belly. The passing of bloody urine is always attended with some danger, particularly when mixed with purulent matter. When it arises in the course of any malignant disease, it shows a highly putrid state of the blood and always indicates a fatal termination.

When the disease has resulted from violence in a full habit of body, bleed to the extent of a pint. Give a dose of Epsom Salts. Keep the patient quiet and upon

a low vegetable diet. If the bleeding proceeds from gravel, the best remedy I have known is,

Uva Ursi ʒi
Cremor Tartar ʒss
Gum Araeic ʒi

Pour upon this a pint of boiling water. Stir it well together and pour it off when it has stood fifteen minutes and sweeten. Dose a wine-glass every hour.

As this remedy may not be at hand, especially at sea, flaxseed tea should be administered freely. A solution of the super-carbonate of Soda gave great relief in the author's own case. Saleratus, taken in the same form, probably would be as efficacious. Fomentations of the lower part of the body or a hip bath should also be tried. If the attack is not connected with inflammatory symptoms, pills of white turpentine and balsam copaiva, muriated tinct. of iron in the dose of fifteen to twenty drops, three times a day in flaxseed tea, will be found useful. Fifteen or twenty grains of alum three times a day is another excellent and safe remedy.

ASTHMA.

This troublesome and sometimes dangerous complaint commences with great wheezing and shortness of breathing, countenance flushed, great anxiety, hollow voice and small pulse when lying down. An emetic of Ipecac, (No. 47,) relieves the patient as frequently as anything else perhaps. The bowels should be freely opened by Epsom Salts, (No. 8,) or any other active purge. Apply a blister to the chest and put the feet into warm water. Let the blister be kept open by basilicon ointment, (No. 30.) Give also a dose of fever powders, (No. 45,) with about a fourth of a grain of Ipecac., every three hours. Sometimes a teaspoonful of ether, (No. 21,) will give immediate relief. This may be repeated once in half an hour to an hour, if it benefits the patient. Animal food and all stimulating drinks must be abstained from.

COUGHS AND COLDS.

The neglect of a slight cold has often led to a fatal consumption. Hence it is highly proper to give early

attention to what may seem to be but a slight cold. One of the best remedies is warm boneset tea taken freely on going to bed, followed next morning by a dose of Epsom Salts, (No. 8.) Should the cold not give way, give an emetic, either of Tartar Emetic, (No. 1,) or of Ipecac., (No. 47.) Let the feet be bathed in warm water before going to bed, and the boneset tea made weak be drank freely, and give an antimonial Fever Powder, (No. 45,) every three hours in molasses. Give a teaspoonful of the cough drops, (see *Recipes*,) several times a day.

GRAVEL.

Symptoms.—Pains in the back shooting down to the bladder and to the thighs; sometimes there is a numbness of the leg and a retraction of either testicle. The pains are often violent, and are terminated by the painful discharge of small stones.

Treatment.—Let the patient drink very freely of a hot solution of Cream of Tartar, (No. 10,) and of tea of Flaxseed, (No. 37.) Let him also take once an hour a teaspoonful of Spirits of Nitre, (No. 20,) in a little water. The pain must be alleviated by full doses of laudanum. Honey taken freely is said to be a good remedy in this complaint; but the best remedy I have ever used is the infusion of uva ursi, gum arabic, and cream of tartar, mentioned in the article on uva ursi, in the "Secondary List," page 25. It gives immediate relief in the greatest proportion of cases. With some patients acids disagree entirely. Saleratus or supercarbonate of Soda, in the proportion of a teaspoonful to a tumbler of water, drank freely is a more appropriate remedy.

DIFFICULTY OF URINE.

Symptoms.—A frequent desire to make water, attended with pain, heat, and difficulty in doing so,—a fullness in the bladder.

Causes.—The urine having been retained too long, —Spanish flies taken internally,—gravel,—blisters, and all the causes of inflammation of the bladder,—inflamed prostate gland, &c.

TREATMENT.—If it arise from simple irritation by blisters, &c., plentiful draughts of warm liquids, as flaxseed tea, gum arabic or barley water, will be sufficient to remove it. The infusion of uva ursi, alluded to in the chapter upon gravel, is here also a valuable remedy. The muriated tincture of iron, in the dose of fifteen drops every half hour, has been highly recommended of late, and in various urinary diseases. If from any other cause, a bladder half filled with warm water, or cloths wrung out of a warm decoction of herbs, should be kept constantly applied over the parts, and mild clysters of thin starch be frequently injected.

SUPPRESSION OF URINE.

SYMPTOMS.—Pain and swelling of the bladder,—violent and fruitless attempts to make water, attended with excruciating pain, &c.

CAUSES.—The same as in a difficulty of urine.

TREATMENT.—As a total suppression of urine is always attended with considerable danger, there should be no delay in endeavoring to remove it. The first step is to bleed the patient, who should immediately after be placed in the warm bath. While he is there, a laxative and anodyne clyster must be got ready, which is to be given as soon as he leaves it, and frequently repeated. In the mean time the warm fomentations, and a bladder of hot water must be kept applied, and a cup of flaxseed tea be taken with a teaspoonful of Ether, (No. 21,) and 20 drops of Laudanum, (No. 16,) be taken every three or four hours. If there be any difficulty in procuring it, twenty drops of laudanum in a little warm barley or rice water, will answer instead. Warm sweet oil, or milk and water, may be injected up the urethra, and 6 or 8 grains of camphor, or one or two teaspoonsful of Spirits Camphor, (No. 26,) in a little milk, be taken every hour.

If no relief is obtained by these means, apply snow or ice to the bladder, or make the patient stand on a cold brick or stone pavement, and dash cold water over his thighs; and if this fail, try the tobacco clyster, (see Rupture,) which sometimes succeeds after everything else has been resorted to in vain. If a catheter can be

procured, try to pass it into the bladder while in the bath. If the patient himself cannot do it,* let a *handy* friend attempt it; if foiled in one position. try another, —success is of the utmost importance, for there is nothing but an *operation*, in the event of its not being obtained, can save life.

In every case of suppression of urine, the order of remedies then is, *blood-letting,—the warm bath,—laxatives and anodyne clysters,—fomentations, or bladders half filled with warm water over the lower belly, camphor and milk every hour,—passing the catheter,—dashing cold water over the thighs and legs, or applying snow or ice to the bladder, and lastly, the tobacco clyster.*

PILES.

Symptoms.—A pain in the fundament when going to stool. On examination small tumors are perceived projecting beyond its verge. They are of two kinds, the blind and bleeding. They may be also internal and external.

Treatment.—When the loss of blood is considerable, it may be checked by the application of ice or cold water, or a solution of Alum, (No. 43,) to the fundament, or by pressure upon the part. A grain or two of White Vitriol, (No. 41,) may be taken three times a day in water, and the bowels kept open with Sulphur, (No. 9,) or mixed with Cream of Tartar, (No. 10,) or Castor Oil, (No. 12.) For the other kind of piles, let an ointment be made by rubbing fine half a teaspoonful of Sugar of Lead, (No. 42,) mixing it thoroughly with about one ounce of lard, of which a piece of the size of a hazlenut may be rubbed on the fundament night and morning; or lard simmered with a little tobacco may be used in the same way. Sixty drops of Balsam Copaiva, (No. 24,) three times a day, is an excellent remedy for this form of piles of long standing.

SCURVY.

Symptoms.—A sense of heaviness, weariness, reluctance to move about, low spirits, loss of strength. The face becomes sallow, bloated, the breathing is hurried by the least exertion, the teeth loosen, the gums become

* See directions, &c., for passing bougies and catheters.

spongy and purple, the breath foul, dark spots appear on the body, old wounds break out afresh, severe wandering pains are felt, particularly by night, the skin is dry, the urine scanty, pulse small, frequent, and towards the last intermitting. Other dangerous symptoms follow until death closes the scene.

In the cure as well as the prevention of scurvy, much more is to be done by diet, habits, &c., than by medicine. Fresh provisions, a large proportion of them vegetable, acid, fruits, vinegar, spruce beer, cider, a beverage of Cream of Tartar, (No. 10,) mineral acids, such as Elixir Vitriol, (No. 14,) fifteen or twenty drops thrice a day in half a tumbler of water. The same is a good wash for the gums. A grain of quinine, one of the Powders, (No. 48,) may be given with the elixir vitriol, or a wine glass of the decoction of bark, (see *Recipes.*) The stiffness of the limbs may be relieved by hot fomentations of chamomile tea, and by rubbing them with a dry hand or a little oil. In hot climates burying the larger portion of the body in the ground gives speedy relief. Citric acid or the salt of lemons ought to be on board of every vessel bound on a long voyage, as it is one of the best preventives and remedies, and may be preserved any length of time. A pleasant beverage is made by dissolving a very little in water and adding sugar.

ITCH,

Appears first on the wrists and between the fingers in pimples with watery heads. Mix Sulphur, (No. 9,) and lard into an ointment, in the proportion of half as much such sulphur as lard, and rub it upon the pimples before a fire, taking at the same time internally two teaspoonsful of sulphur in molasses. Let this be repeated three successive nights, or rub a piece of Mercurial ointment, (No. 31,) on the wrists, groins and hams, and wherever it appears night and morning, and avoid cold and moisture.

VERMIN,

Such as lice, or crabs, as they are commonly called, are destroyed by rubbing upon the part a very small quantity of Mercurial Ointment, (No. 31.)

MIDWIFERY.

MANY cases of childbirth on board of vessels have come to the author's knowledge where no professional aid could be obtained. In accordance with the expressed wish of many ship-masters, and with the author's own views of propriety, he has subjoined a few simple directions in cases more to be dreaded at sea than a gale of wind.

Previous to any particular directions, it is well to remark that the various stages of labor are a perfectly natural process, rarely needing interference. It is estimated that not more than one case in one hundred and fifty to two hundred needs the interposition of art. Nature, under the arrangements of Divine Providence, is capable of overcoming obstacles of a most serious character.

The first sign of labor usually is pain, sometimes slight, sometimes sudden, severe cutting pains from the lower part of the bowels to the back and the reverse. These continuing for a longer or a shorter period gradually change to those of a bearing down character. This is generally indicated by a more subdued tone of voice in the cries of the patient. At the last point of the process the patient suffers extremely, and indicates her agony by a peculiar cry. It is at this point only, in general, that assistance begins to be needed.

The patient should have her night dress drawn up, and pinned around the waist to prevent it being soiled, and a sheet in its place pinned around the body. Let her lie upon her left side upon some thick or folded covering, that will not be injured by the discharges, and that can be readily removed. Let her knees be somewhat drawn up, her back to the attendant. She should be allowed a handkerchief, a rope or twisted sheet fastened at one end, to hold on to during a pain.

Should there be an inclination to pass anything from the bowels or bladder, it should not be resisted.

After the pains have continued some time, the waters, as they are called, break and come away, and the head of the child almost immediately comes nearer to the external parts. As the child's head, which is the part most frequently presented, begins to protrude and press upon the parts between the two passages, let a soft cloth, or a towel, or a diaper, be folded and applied upon the palm of the hand with considerable pressure to the parts stretched by the head, in order to prevent any rupture by a too rapid delivery of the head of the child.

Let this pressure be continued until the head is born. Support the head and body of the child as they successively come into the world with the left hand. As soon as the child is born bring it out from under the bedclothes. If the cord or navel-string is wound round its neck, remove it immediately. If the child is healthy it will begin to breathe, and with its first breath will begin to cry. When the action of the lungs is well established by the child's crying, tie the navel-string closely with a piece of narrow tape, twine, or any convenient string, about an inch from the navel, and with a pair of scissors, if you have them, cut the cord about half an inch above the ligature, and let the mother's end of the cord bleed into a basin. If in the course of ten or fifteen minutes the patient does not discharge the after-birth, wind the navel-string around the two first fingers, and gently draw upon it for a minute or two. Be careful not to break it. When you feel the after-birth in the lower part of the passage, it may be hooked with the finger, and slowly drawn out and deposited in a basin.

The child being properly cared for, use gentle friction with the hand upon the bowels of the mother, to induce the womb to contract. Then apply a towel, a diaper, or any firm cloth, as a bandage on the hips and lower part of the bowels over the chemise, and pin it pretty closely with four or five pins. A folded diaper or cloth should be applied to the passage to retain the

discharges. Remove the soiled coverings, let the dress of the patient be brought down to its proper place. Her diet should be light for four or five days.

She should take a dose of castor oil or calcined magnesia on the third day. If after-pains attack give one to two teaspoonsful of spirits camphor, (No. 26,) and twenty-five drops of laudanum, (No. 16,) or from one-fourth to half a grain of morphine.

CARE OF THE CHILD.

The child should be anointed with lard or sweet oil, in order to remove a white scurf which more or less covers the skin of the new-born infant, and which soap alone will not remove. When the scurf is well rubbed with the oil, wash the whole body with soap and lukewarm water. Bind up the navel string as you would a sore finger,—lay it against the belly, and put a band around the bowels to keep it securely.

Put the child to the breast as soon as dressed, and the mother is made comfortable, that the instinct with which children are born, leading them to nurse, may not be lost. Give the child two or three teaspoonsful of molasses and water, and every morning a teaspoonful of cold water. This last is to prevent the sprue or sore mouth. The bowels must be carefully attended to until the color of the stools change from the dark, tar-like matter to yellow.

FEMALE DISEASES.

It is not the intention of the author to enter extensively into the subject of female complaints, but to give a few simple directions to females whose sense of modesty often prevents application for professional advice. I have been led to this also by the request of a number of shipmasters on board of whose vessels great numbers of emigrants take passage. As in the case of other diseases treated of in this edition, some of the remedies are not included in the regular medicine chest list.

ABORTION OR MISCARRIAGE.

The frequency of miscarriages on board of vessels, as well as upon the land, seems to justify a few plain directions for such emergencies.

Causes.—These are constitutional and incidental. The remarks that follow refer more particularly to the latter. Miscarriages result from sudden shocks or falls, from a blow upon the bowels, from violent muscular exertions, immoderate exercise, strong mental excitement, and various other causes.

Symptoms.—The chief symptoms of threatened miscarriage are short sharp pains in the back and lower part of the bowels, or sudden loss of blood from the womb.

Treatment.—This consists of two parts, viz: the prevention of abortion when threatened, and the safe conduct of the patient through it, when we have reason to conclude that it has occurred. The first step is to place the patient upon her back. If she is of a robust constitution, if an accident or severe exercise in long walks, running, or the motion of a ship, &c., has brought on the difficulty, three-fourths of a pint to a

pint of blood should be taken from the arm if there is any person at hand competent to perform the operation. A full dose of laudanum, (No. 16,) even to the extent of forty to sixty drops, should be immediately administered, or two grains of solid opium. Forty drops more of the laudanum should be given three or four hours after, if the symptoms continue. The bowels must be moved by the laxative injection. The patient should be kept as quiet as possible, in mind and body, and carefully avoid undue warmth from the bed or bedding. If there should be a considerable discharge of blood, the pains become regular and extend around the body, with a sense of bearing down, there is little hope of avoiding abortion. The flooding may increase and the patient become faint and appear to be sinking. It rarely happens, however, that she does not soon recover; but should she faint away the discharge would perhaps be more effectually stopped. Cold drinks, cloths wrung out in cold and even ice water, must be laid upon the bowels and between the thighs. Should the flow of blood be checked, the cold applications should be laid aside. If the discharge is excessive, it may be necessary to stop the passage by introducing a silk handkerchief or some other soft cloth well smeared with lard or oil, of sufficient size to stop the bleeding. If the bleeding comes on after the contents of the womb are discharged, full doses of laudanum and the cold applications must be employed. The directions given under the head of Uterine Hemorrhage are also appropriate to these circumstances.

SUPPRESSION OF THE MENSES.

This affection occurs from cold, grief and other depressing passions, an idle, luxurious life, abuse of acids, &c. It is sometimes a symptom of consumption.

When the discharge has been for some time interrupted, especially in persons previously healthy, bleedings will often occur from the lungs, the stomach or the nose. The patient usually becomes very costive and dyspeptic. Colicky pains and hysteric symptoms are a common attendant.

Treatment.—If the patient is of a robust constitution, and a full habit, she may be bled from the arm, from half a pint to a pint. The hips and lower part of the bowels should be fomented by flannels wrung out in hot water; the patient should every day sit down in a tub of warm water for fifteen minutes or more. Bathing the feet, also, is always useful. There are a great variety of remedies in professional and popular use. Among the latter perhaps none are superior to the infusion of tanzy.

A wine-glassful of it, three or four times a-day, for several days, or even a month, is a proper dose. Tincture of myrrh, in the dose of a teaspoonful thrice a day; half a teaspoonful of carbonate, or filings of iron, and any form of iron almost, are good remedies. I have prescribed to more than five hundred patients, with scarcely a failure of success, the Female Pills. (See Recipes.) They can be made up at any apothecary store.

A preparation well known to physicians, but not ordinarily kept on hand in apothecary shops, called Dewees' Volatile Tincture of Guiac, is the next best remedy. Dose, one or two teaspoonsful in sweetened milk or water three times a day. Griffith's Myrrh Mixture is another efficacious combination for suppressed menstruation. Recipes for all these medicines will be found on a previous page amongst other formulas. Boneset, (No. 49,) three times a day, will frequently answer every purpose when other more convenient remedies are not at hand. The "Tonic Solution" is also an efficient remedy.

EXCESSIVE MENSTRUATION.

Symptoms.—This affection may exist in two forms, viz.: menstruation occurring regularly once in four weeks, but excessive in quantity, or at lesser intervals, and also in too great quantity. Under both, the patient becomes debilitated, the face pale, the pulse feeble, and exercise occasions unusual fatigue, the extremities become cold, the feet and ankles swell towards night, the patient suffers from pain in the back in an erect position,

and is affected with various dyspeptic symptoms. By long continuance of the excessive discharge, that uncomfortable disease, falling of the womb, ensues.

Causes.—A relaxed state of the system, owing either to hard labor and poor diet, or to an indolent, luxurious mode of life, and to some other causes.

Treatment.—The best remedy I have found is the guiac tincture mentioned in the previous chapter. The "Tonic Solution" is also very good in the dose of a teaspoonful three times a day. Gum kino in the dose of from five to ten grains, three or four times a day, will also be found useful. The muriated tincture of iron, in the dose of fifteen tot wenty drops in a wineglass of sweetened water, thrice a day, and iron in most any of its forms, taken for some time will bring about a happy change. These remedies are liable to be followed by costiveness, which should be obviated by such laxatives as cream of tartar, (No. 10,) or calcined magnesia, (No. 5,) or Seidlitz powders. Should the discharge be very excessive, astringent injections should be employed, as one or two teaspoonsful of white vitriol, (No. 41,) dissolved in a pint of water.

Early hours and moderate exercise, and cold sea bathing, are important matters to be observed in this complaint.

UTERINE HEMORRHAGE, OR BLEEDING FROM THE WOMB.

This affection may arise from violence, over-exertion of the body from violent emotions of the mind, abortion, and other causes. Particular directions for those cases which proceed from abortion will be found in the chapter upon that subject.

Treatment.—Let the patient be kept as quiet as possible in a horizontal posture. Cloths should be wrung out in cold, and even in ice water, and placed upon the lower part of the bowels and between the thighs, and repeated as they grow warmer. The drink of the patient should be cold, and the diet of the lightest kind. Should these means not check the discharge, and especially if it should increase, blood-letting to

the extent of a pint must be resorted to, if any one can be found to perform the operation. Rub up twelve grains of sugar of lead, (No. 42,) and one grain of opium, and divide into four pills or powders, and give one in molasses every half hour until the discharge ceases, or the doses are all taken. Three grains of sugar of lead, and eight drops of laudanum, (No. 16,) may be administered when solid opium is not on hand. These medicines must be followed within six hours by a dose of castor oil. In this form of hemorrhage and some others, ipecac., (No. 47,) is a valuable remedy, even when given so as to occasion vomiting. A dose of ten grains, repeated in half an hour, or an hour, so as to nauseate without vomiting, is perhaps to be preferred. The "Tonic Solution," a teaspoonful every hour, may also be used.

LEUCORRHŒA, OR WHITES.

This disease is so well known to the sex, that a particular description is omitted from motives of delicacy.

When it has long continued it leads to great general debility and to weakness of the parts affected. The cure of it then is very difficult.

TREATMENT.—The constitution of the patient must be strengthened by suitable medicines, and the parts affected, by local applications. Among the former are the various preparations of iron, as the muriated tincture of iron, twenty drops three times a day; the carbonate or the oxide of iron, in half teaspoonful doses in syrup, three or four times a day. The "Tonic Solution," "Dewees' Tincture," the "Female Pills," and the myrrh mixture (see recipes) are all excellent medicines in leucorrhœa. The mixture or the tincture may be used at the same time with the pills. Among the more recently discovered medicines perhaps none will be found superior to the hydriodate of potash. (See page 25.) It is necessary to continue the use of these medicines for some time to produce the desired effect. The second class of remedies consists of various washes administered with a female syringe. A suita-

ble wash may be made by dissolving two drachms each of alum and white vitriol in a pint of water, which should be applied four or five times a day. A strong decoction of white oak bark, and of green tea, may also be employed in the same way. Nitrate of silver, commonly called lunar caustic, is probably a better remedy than any of these. If it were to be applied in its solid state directly to the whole surface affected by the disease, it would produce an immediate and favorable change. This operation would require the attendance of a physician and the use of peculiar instruments. If, however, half a drachm of the caustic were dissolved in half a pint of pure rain or river water, and used with a glass or ivory syringe so that the solution should reach every portion of the surface affected, it probably would answer every purpose of the solid caustic. It should be employed three or four times a day for two or three days, and followed afterwards by a solution of a drachm of sugar of lead, (No. 42,) or of white vitriol, (No. 41,) morning, noon and night. The caustic is rather a severe remedy, but an efficacious one. Care should be taken lest it indelibly stain the linen of the patient.

A nourishing diet, regular and early hours, with the cold bath at proper seasons of the year, are matters to be attended to in order to derive all the advantages of the other treatment.

PROLAPSE, OR FALLING OF THE WOMB.

It does not consist with the design of this work to enter particularly into a consideration of this uncomfortable disease. A few general and plain directions which the author has found useful in many cases, he hopes will be found useful to such as may consult this manual on their own case.

If the prolapse is the result of sudden injury, the womb is to be replaced by the hand of an assistant, and the body kept for a time in a horizontal position. If the complaint proceeds from a relaxed state of the parts, from leucorrhœa and other debilitating causes, the bowels must be supported by a proper bandage or

by some of the abdominal supporters so common at this day among truss manufacturers. A wash made by dissolving two drachms each of white vitriol, (No. 41,) and alum, (No. 43,) in a pint of water should be thrown up several times a day with a female syringe.

The principal remedies which I have been accustomed to administer internally are the myrrh mixture and "Dewees' Volatile Tincture of Guiac," continued as before prescribed, for three or four weeks.

DISEASES OF CHILDREN.

THE difficulty of acquiring a knowledge of the diseases of children, on account of their incapability of making known their sensations by language, has by some physicians been made an excuse for neglecting the subject of infantile diseases. This very difficulty is an argument in favor of committing it to men of intellect and science.

Although children cannot communicate their sensations by language, the symptoms by which we determine the seat of the disease are more uniform in their appearances and more certain in their indications than in adults, neither their habits, their false delicacy, fear nor anxiety, influencing them. Particular attention should be paid to what passes from their bowels. A very large proportion of their diseases originate from disordered secretions of the stomach and bowels. Their nervous system is more easily excited by causes of irritation, such as worms, teething, acrid and indigestible substances in the stomach and bowels, than that of adults.

There exist in some classes of society strange and absurd ideas respecting the management of infants. They suppose that some children are born with a strong appetite for a particular kind of food which the mother had a longing for before birth, and that they will die unless they have it. I recollect one case where mince pie was given to a new-born child that cried a great deal. Fatal consequences have resulted doubtless from such errors.

Medicines are not to be given to children to prevent diseases, nor are they to be given merely to produce evacuations, but an excitement counter to the diseased action. Too much nursing is as injurious almost as

too little. I have no doubt that many children are nursed to death.

The limits of this work will not admit of extensive remarks under this head. Some of the diseases, common both to children and adults, have already been noticed in the previous pages. The following lines may prove serviceable until the attendance of a physician can be obtained.

RETENTION OF THE MECONIUM.

The meconium is the matter found in the bowels at birth, viscid, and of a dark green color. Ordinarily, if the child is put to the breast immediately after dressing, the first milk of the mother will operate as a purgative. If it should not, give the child a few teaspoonsful of cold water strongly sweetened with molasses.

All the diseases of the first month, if no other cause is evident, should be suspected to arise from the retention of the meconium. Severe paroxysms of pain in the bowels, indicated by crying, writhing, swelling of the bowels, convulsions, epileptic fits, &c., arise from this cause. Lockjaw is a very common consequence in the West Indies. The first thing to be done in all these cases, is to evacuate the bowels. A teaspoonful of castor oil is usually sufficient for this purpose. If this is vomited up take of

Senna leaves,	℥i. one drachm,
Manna or coarse Sugar,	℥ss. half an ounce,
Water,	½ a pint,

boil it down one half, and feed the child freely until the bowels are moved. The operation of cathartics may be forwarded by injections of catnip, chamomile, or other aromatic tea. It is not unfrequently proper during the first month to administer mercurial purges. The blue pill, (No. 7,) in the dose of one or two dissolved in a teaspoonful or two of breast milk, is generally sufficient. Should this not act sufficiently, calomel, (No. 3,) in the dose of from four to eight grains, should be administered. There is no danger of salivating young children. Owing to the mucus or slimy matter of the bowels, children will often require as large a

dose of calomel as adults. When convulsions are present the warm bath should be used with cathartics in full doses.

THRUSH, OR SPRUE.

This disease frequently appears within the first month, but it may, almost universally, be prevented by giving a teaspoonful of cold water soon after birth, repeating it every morning, and keeping the bowels open.

Symptoms.—It commences with white specks upon the lips and corners of the mouth, and on the tongue. Sometimes the whole inside of the mouth is covered with these specks, and of increased size, extending to the throat, and also through the whole length of the bowels. The child is, commonly, very drowsy before the specks appear.

Treatment.—Mix six grains of Ipecac. or one fourth of one of the powders, (No. 47,) in six teaspoonsful of warm water, and give one teaspoonful every ten minutes, until the child vomits freely. From half to a whole teaspoonful of Calcined Magnesia, (No. 5,) should follow the ipecac. unless the bowels should be freely opened by the ipecac. After the bowels have been moved, give the child ¼ grain of ipecac., or a little upon the point of a penknife, once in three hours. The tonic solution, (see *Recipes*,) in the dose of from twenty to forty drops three times a day, is an excellent medicine in this disease, and is to be given after the stomach and bowels have been evacuated. Castor Oil should not be given for the sprue. The author never lost a patient who took ipecac. as above directed.

COSTIVENESS.

Children who nurse the bottle, or who are fed with a spoon, are apt to be costive. Pure cow's milk is too strong food for young infants, and should be reduced one-third with water, and boiled with a little white sugar. The use of oatmeal gruel will often keep the bowels regular. If the infant is young, this would be an unsuitable diet. If medicine should become neces-

sary, divide one of the Mercurial Pills, (No. 7,) into four parts, and give one part night and morning, dissolved in milk, for three or four days. Dandelion or mullen tea, fed freely, is a good remedy. Some nurses introduce a piece of molasses candy into the extremity of the bowels, to break up a costive habit. If costiveness is allowed to continue, the patient will probably be affected with convulsions.

CONVULSIONS, OR FITS.

Put the patient immediately into a warm bath. While the bath is preparing, dissolve two teaspoonsful of common salt in half a pint of water, and give it as an injection, and repeat until the bowels are well moved. As soon as the child can swallow, give ten grains, or two-thirds of one of the papers of Calomel, (No. 3,) in a little molasses. If the fits are owing to improper food, administer from six to ten grains of ipecac., as directed above in Sprue. If from teething, lance the gums, and apply one to two leeches to each temple, if they can be procured, and act on the bowels as directed above, or by senna and salts. From 5 to 10 drops of Hartshorn, (No. 17,) should be given in a teaspoonful of water, and repeated in half an hour, and mustard, or horse-radish leaves, applied to the feet. A teaspoonful of saleratus or pearlash, in a half pint of water given by injection, is often a powerful remedy in fits.

If the spasms continue after the use of the above remedies, give Laudanum, (No. 16,) one drop, if the child is under a month old, and from two to four drops —according to the increase of age.

DIFFICULT TEETHING.

Symptoms.—Fretfulness, inclination to bite hard substances, slavering, starting in sleep, eruptions about the mouth and head, flushing of the face, diarrhœa, frequent vomiting, irregular and green stools, bloating of the hands and face, convulsions.

Treatment.—Lance the gums down to the teeth, give the child some hard substance to bite upon, or

rub the gums with hard and polished substances. Examine carefully, to ascertain if any other disease affects the system, and if so, use the proper means to remove it. Put the child into a warm bath, and use other remedies to promote perspiration. Give the child 10 grains of Calomel, (No. 3,) if there is no diarrhœa. It is unsafe to stop a diarrhœa if one exists. If it is very severe, it may be moderated. Costiveness should never be allowed to exist. The bowels may be kept open by Castor Oil, (No. 12.) If the stools are green, give the recipe under the head of diarrhœa, (page 94,) one teaspoonful thrice a day. If the head is hot, put the feet in warm water, apply blisters behind the ears, and a ginger or mild mustard plaster to the feet. In severe cases of teething, there is great danger of dropsy of the brain. The warm bath is an excellent remedy for children in almost any stage of teething. It is very common for children, when teething, to be affected with eruptions behind and about the ears. It is unsafe to heal these eruptions until the teeth are all cut through.

VOMITING.

All healthy infants vomit more or less. When it is inordinate, and arises from disease, it should be checked. Eight or ten grains of Ipecac., (No. 47,) in divided doses, given once in ten minutes, will frequently check it. If not give the rhubarb and magnesia, or chalk mixture, &c., as directed under "Diarrhœa;" apply cloths wrung out in hot water, or ginger or mustard plasters, to the pit of the stomach. Sometimes eight or ten grains of Calomel, (No. 3,) will stop the vomiting immediately. Let the bowels be moved by injections of salt and water. If all these fail, use the warm bath.

WORMS.

Symptoms.—These are rather uncertain, and are such as are produced by other causes. The most common are offensive breath, frequent rubbing of the nose, itching of the fundament, voracious appetite, swelling

of the bowels with wind, white milky or slimy stools, sleepiness, particularly after eating, bloated face, frequent flushing of the face, irregular pulse, palpitation of the heart, starting in sleep, grinding of the teeth, suffocation, convulsions, &c.

TREATMENT.—The long round worm is the most common in children, and should be treated with strong purges. 10 to 15 grains of Rhubarb, and 8 to 10 grains of Calomel, will generally prove efficacious, especially if repeated within a day or two. Alum whey has sometimes destroyed them. One or two of the Purging Pills, (No. 6,) reduced to powder and given in molasses, may be administered. Among the remedies not usually put into medicine chests, are Carolina Pinkroot, Cut Hair, Cowhage, Oil of Wormseed, Elixir Proprietatis, Common Salt. Half an ounce of the pinkroot may be steeped in half a pint of boiling water, and given freely through the day, and at night a purge either of the Pills, (No. 6,) or 10 grains of Calomel, (No. 3,) or senna and manna.

The small pin worms have their location mostly in the extremity of the bowels, and are more difficult of removal by medicines taken by the mouth. All strong purges should be avoided except calomel.

Among the best remedies for this kind of worms are injections of two teaspoonsful of Spirits Camphor, (No. 26,) and half a pint of milk repeated several times. Aloes one quarter of an ounce, and milk or water half a pint, is another good remedy. A strong decoction of walnut or butternut bark, given freely by the mouth, is useful in discharging these worms and in preventing their return. Children who eat a great deal of salt with their food are rarely affected with worms.

DIARRHŒA.

This disease may arise in children from a bad constitution, warm damp rooms, confinement, exposure to cold and moisture, improper food, and want of cleanliness.

TREATMENT.—If the disease be but of few days'

standing, the following may check it at once. Take of

Powdered Rhubarb, 8 grains,
Calcined Magnesia, 30 grains,
Powdered Gum Arabic, a drachm,
Essence of Cinnamon or Peppermint, } 10 drops,
Carbonate of Soda, or Saleratus, 5 grains,
Cold water, 2 large spoonsful.

Mix. Dose a teaspoonful every half hour until it operates.

If the disease is accompanied with fever, an emetic of Ipecac., (No. 47,) should commence the treatment. Mix from five to ten grains in a large spoonful of warm water, of which give a teaspoonful every ten minutes. If the child be not of very delicate constitution, eight grains of Calomel (No. 3,) should next be administered. If the child is feeble, two of the blue mercurial pills, (No. 7,) should be dissolved in a little milk or water and given at one dose. Be careful of the diet of the child, which should be light, such as arrow-root, flour-porridge, with equal parts of milk and lime-water, if to be obtained.

If the pulse is small, the skin and extremities cold, the warm bath and flannels next to the skin should be immediately applied. If vomiting comes on, apply mustard or warm poultices to the pit of the stomach, injections of salt water, catnip or pennyroyal tea. Sometimes eight or ten grains of Calomel will quiet the stomach more speedily than anything else. If debility ensues, administer the Tonic solution and the chalk mixture (*see Recipes*) once in three hours. Small doses of Ipecac., one eighth or one quarter of a grain, every two or three hours, acts both as a tonic and astringent.

If the stools should be green or of a curdled appearance, lime-water, chalk, or the Rhubarb mixture mentioned above, should be given every two or three hours. The expressed juice of fresh spearmint boiled, skimmed, sweetened with white sugar and fed freely

to the child, gave immediate relief in two bad cases under my own charge.

If the stools are white or clayey, mix up a blue pill, (No. 7,) with one drop of Laudanum, as much Ipecac. as you may take up on the point of a penknife, and give it in a teaspoonful of milk or water, once in six hours to a child a year old and under, and increase the laudanum to three drops, according to age. If the bowels swell and are affected with griping, give frequent injections of Chamomile tea.

Should the looseness continue from day to day, and become a habit, decoctions of astringent barks, roots, &c., such as white oak bark, blackberry and hard hack root, should be given several times a day.

The Tonic Solution is an excellent remedy, and may be continued a long time with advantage.

CHOLERA INFANTUM OR SUMMER COMPLAINT.

This disease in the Northern States makes its appearance in the months of July, August, September and October. Cases of it are rare in the latter month.

Symptoms.—It usually commences with diarrhœa, which continues sometimes for weeks without any alarming symptoms. At other times, the attack is by violent vomitings attended with high fever. The discharges from the bowels present a great variety of appearance. Sometimes they are very offensive. The disease is accompanied by fever, great restlessness, often by severe pain, increased by paroxysms with intervals from fifteen minutes to two hours. The pulse is usually quick and weak, the head hot, and the hands and feet cold. The patient is generally thirsty and vomits immediately after drinking—the eyes often appear languid and hollow, the child sleeps with his eyelids half closed. Sometimes the vomiting ceases for several days and then returns again, the looseness continuing. Sometimes the discharge is fatal in 48 hours, and sometimes also it continues for months.

Treatment.—When the disease comes on with vomiting and purging, like Cholera Morbus, the stom-

ach and bowels will be sufficiently emptied. If only with vomiting, an emetic of Ipecac., (No. 47,) dose from six grains to twelve, will frequently check the vomiting at once. This should be followed by 8 to 10 grains Calomel, (No. 3,) unless the constitution of the child is exceedingly delicate. Strong peppermint or cinnamon water should be given also to quiet the stomach, and ginger moistened with strong spirits, applied to the pit of the stomach. If the stools are frequent, administer anodyne injections, (*see Recipes*,) of half a wine-glass of thin starch to four or five drops of Laudanum, (No. 16,) to a child under a year old, and 8 drops if two years, 25 drops to a patient 10 or 12 years of age. A single dose of calomel at the very commencement of the attack will sometimes quiet the whole system at once. Flannels of several thicknesses wrung out in hot water, laid on as hot as can be borne, frequently repeated, are an excellent application. Burdock leaves, horse-radish leaves, and other articles of the kind, bruised, heated on a shovel, or otherwise, and laid upon the bowels, are also excellent remedies. If the disease continues, mix two grains of Ipecac., (No. 47,) and five drops of Laudanum, (No. 16,) with eight teaspoonsful of cold water, and give a teaspoonful of the mixture every three hours to a child under one year. The laudanum may be increased according to the age of the patient.

CROUP.

This disease is of a most dangerous character. If suffered to pass beyond the first stage, it is almost certainly fatal. Whatever is done, therefore, must be done immediately.

Symptoms.—It comes on usually quite suddenly, and is characterized by a laborious breathing and a peculiar shrill cough, as if the patient was breathing or coughing through a brazen tube. At other times it comes on much more gradually, the child appearing dull and fretful, for a day or two the eyes are heavy. As the disease advances there is a convulsive struggle

in breathing, the child throwing back his head with some force.

Treatment.—Give an emetic of ten to fifteen grains of Ipecac., or one-third or more of the contents of one of the Papers, (No. 47,) with ten drops to sixty of Antimonial Wine, (No. 28,) according to the age of the patient, until full vomiting is produced, bathe the feet and legs in warm water, apply leeches, if they can be procured, to the throat, or a poultice sprinkled with a little mustard. Give as soon as convenient a ten grain dose of calomel. The neck may be rubbed with Hartshorn, (No. 17,) frequently. Should the disease not yield, apply a blister to the neck. Let the syrup of Squills, (No. 22,) with five or six drops of antimonial wine, be given every three hours.

Should the symptoms return, renew the emetic, and other remedies. If a physician can be procured, secure his attendance as early as possible, but commence the treatment above described, without waiting for his arrival.

REMARKS UPON CHILDREN'S DISEASES.

The diseases of young children are in general simple in their character. They arise, chiefly, from derangement of the stomach and bowels. Improper food is the most frequent source of disease in early infancy, occasioning wind, pain, diarrhœa, green stools, &c. These last show the existence of acidity in the stomach and bowels, and are to be corrected by lime water, magnesia, or magnesia and rhubarb, in the form directed under the head of diarrhœa.

Many a mother spends sleepless nights and anxious days over her little one, whose piercing and continual cries are occasioned by improper diet. The mother's own breasts often furnish the aliment of the mischief to her babe, either because acid food or a deranged state of her own digestive organs prevents her food from being converted into healthy milk. A young infant rarely cries unless suffering pain. If the mother has insufficient nurse for her child, the best substitute is fresh cow's milk, diluted with one-third part water,

boiled and sweetened with a little white sugar. As the child grows older, the proportion of water may be reduced. When a child is troubled with wind, aromatic seeds, the root of sweet flag, and such like articles steeped in boiling water, and fed freely to the child, will give relief. The following is a very good combination for the same purpose :

℞ Paregoric,
Aromat. Syrup of Rhubarb,
Elixir Salutis,
Syrup of Ginger,
Cinnamon Water,
} equal parts.

Dose, one teaspoonful diluted with the same quantity of water. By observing these directions, most crying children may become quiet, especially if the mother will take a dose of magnesia, or magnesia and rhubarb, herself.

SURGERY.

EXTERNAL injuries to the body, resulting from disease, accident or design, are,

Contusions,
Wounds,
Fractures,
Dislocations.

A CONTUSION

Is the necessary consequence of every blow, and is known by the swelling and discoloration of the skin.

If slight, bathe the part frequently with cold vinegar and water for a few hours, and then rub it well with brandy, or spirits of any kind. Should it be very great, or so as to have affected the whole body, which may be known by a general soreness, bleed and purge the patient, and confine him to a diet of rice water, lemonade, panada, &c. If fever comes on, repeat the bleeding, purging, &c. In all cases of this nature, be sure the water is regularly evacuated, for it sometimes happens that in consequence of the nerves of the bladder being *palsied* by the blow, the patient feels no desire to pass it, though the bladder be full. If a suppression ensues, pass a catheter, if possible, or procure assistance for that purpose.

OF SPRAINS.

Plunge the part sprained into very cold water, and hold it there as long at a time as you can bear it—for several hours—then rub it well with camphorated spirits. If the accident has happened to a joint, as in the ankle, and it remains weak, pour cold water on it from the spout of a teakettle, held at a distance, several times in the day. The most serious effect, however, resulting from contusion, is when the blow is applied to the

head, producing either concussion or compression of the brain.

CONCUSSION OF THE BRAIN.

SYMPTOMS.—The patient is *stunned*,—his breathing slow,—drowsiness,—stupidity,—the pupil of the eye rather *contracted*,—vomiting. After a time he recovers.

TREATMENT.—Apply cloths dipped in cold vinegar and water to his head, and when the stupor is gone, bleed him, and open his bowels with Epsom Salts, (No. 8.) He should be confined to bed, kept on a low diet, in a quiet situation, and every measure taken to *prevent* an inflammation of the brain, which, if it comes on, must be treated by copious bleeding, blisters, &c.

COMPRESSION OF THE BRAIN.

SYMPTOMS.—Loss of sense and motion,—slow, noisy, and laborious breathing,—pulse slow and irregular,—the muscles relaxed, as in a person just dead,—the pupil of the eye *enlarged*, and will not contract, even by a strong light,—the patient lies like one in an apoplectic fit, and cannot be roused.

TREATMENT.—Open a vein and draw off sixteen or twenty ounces of blood, shave the head, and, if possible, procure surgical assistance without delay, as there is nothing but an operation that can be of any avail.

WOUNDS.

In bad wounds there is often a profuse bleeding which requires the first and most particular attention. The application of dry lint and a bandage will often succeed, but if an artery of any considerable size is injured, and the blood spurts out largely, you must form some tight compression between the wound and the trunk of the body or heart, which will stop the discharge, till you can find the bleeding, and secure it with your needle. If it be an arm or a leg that is wounded or taken off, take a strong handkerchief or large cord, and tie it moderately tight some way above the wound: if the injury is below the knee or elbow, it will be best

to fix the cord two or three inches above the knee or elbow, and put a round short piece of wood beneath the cord; by turning this stick round, you tighten the cord till it stops the blood; let some one hold the stick in this position, till you wipe the blood from the wound; then slacken the cord till the blood spurts out, at which time fix your eye on the vessel; order the cord again tightened, and keep sight of the vessel, till you pass your crooked needle along side of the vessel, about a quarter of an inch deep, and draw the thread half through; then enter the needle where it came out, and pass it up the other side of the blood-vessel so that the point may come out near where you entered it; then draw the thread through, and tie it tight, and it will stop the bleeding of that vessel; proceed in like manner for others; then take off the cord, and dress the wound with lint, bandage, &c. After the first dressing, you had better let the wound go for three or four days before opening it, after which it may be dressed every day. If the discharge of matter be considerable, put a little lint over the wound, and over that a plaster of basilicon, but when there is little or no discharge of matter, apply simple ointment, or Cerate, (No. 29.) If any wound, bruise, or swelling grows painful, turns purple, or dark colored, and small blisters arise on or near it, of a purple, dark, or yellow color, then there is danger of gangrene, to prevent which, let the part be scarified or pricked in several places with a lancet, and the scars dressed with Basilicon, (No. 30.) It may be wet with vinegar, brine, or sea salt. A cloth wet with vinegar, and some Bark, (No. 11,) sprinkled in, may be put on it; also the bark must be given inwardly, as directed in fevers and ague. Swellings ought to be poulticed, and when they grow soft, open and dress them with basilicon, and continue the poultice some time over the salve.

PUNCTURED WOUNDS.

These are caused by sharp pointed instruments, as needles, awls, nails, &c. Having stopped the bleeding, withdraw any foreign body, as part of a needle, splin-

ters, bits of glass, &c., that may be in it, provided it can be done easily; and if enlarging the wound a *little* will enable you to succeed in this, do so. Though it is not always necessary to enlarge wounds of this nature, yet in *hot weather*, it is a mark of *precaution*, which should never be omitted. As soon as this is done, pour a little turpentine into the wound, or touch it with caustic, and then cover it with a poultice moistened with Laudanum, (No. 16.) This practice may prevent locked-jaw, which is but too frequent a consequence of wounds of this description. When matter forms, cover the part with mild dressings, as a common sore. Laudanum may be given in large doses, to relieve pain, and should the inflammation be excessive, bleed and purge. In hot weather, however, bleeding should be employed in great moderation.

CONTUSED WOUNDS.

Wounds of this nature are caused by round or blunt bodies, as musket balls, clubs, stones, &c. They are in general attended by but little bleeding; if, however, there should be any, it must be stopped. If it arises from a *ball* which can be easily found and withdrawn, it is proper to do so, as well as any piece of the clothing, &c., that may be in it; or if the ball can be distinctly felt, directly under the skin, make an incision across it and take it out, but never allow of any *poking* in the wound to search for such things; the best extractor of them, as well as the first and best application in contused wounds, proceed from what they may, being a soft bread and milk poultice. Should the inflammation be great, bleed and purge. Pain may be relieved by laudanum, and if the parts assume a *dark* look, threatening mortification, cover them with a blister.

If the wound is much torn, wash the parts very nicely with warm water, and then (having secured every bleeding vessel) lay them all down in as natural a position as you can, drawing their edges gently together, or as much so as possible, by strips of sticking plaster, or stitches, if necessary. A soft poultice is to be applied over the whole.

WOUNDS OF THE LIMBS, &c.

OF THE EAR, NOSE, &c.

Wash the parts clean, and draw the edges of the wound together by as many stitches as are necessary. If the part is even completely separated, and has been trodden under foot, by washing it in warm water, and placing it *accurately* in its proper place by the same means, it may still adhere.

OF THE SCALP.

In all wounds of the scalp it is necessary to shave off the hair. When this is done, wash the parts well, and draw the edges of the wound together with sticking plaster. If it has been violently torn up in several pieces, wash and lay them all down on the skull again, drawing their edges as nearly together as possible by sticking plaster, or if necessary by stitches. Cover the whole with a soft compress smeared with some simple ointment, (No. 29.)

OF THE THROAT.

Seize and tie up every bleeding vessel you get hold of. If the windpipe is cut only *partly* through, secure it with sticking plaster; if it is completely divided, bring its edges together by stitches, taking care to pass the needle through the loose membrane that covers the windpipe, and not through the windpipe itself. The head should be bent on the breast, and secured by bolsters and bandages in that position, to favor the approximation of the edges of the wound.

OF THE BELLY.

Close the wound by strips of sticking plaster, and stitches passed through the skin, about half an inch from its edges, and cover the whole with a soft compress, secured by a bandage. Any inflammation that may arise is to be reduced by bleeding, purging, and a blister over the whole belly.

Should any part of the bowels come out at the wound, if clean and uninjured, return it as quickly as possible; if covered with dirt, clots of blood, &c., wash

it carefully in warm water previous to so doing. If the gut is wounded and only cut partly through, draw the two edges of it together by a stitch, and return it; if completely divided, connect the edges by four stitches at equal distances, and replace it in the belly, always leaving the end of the ligature projecting from the external wound, which must be closed by sticking plaster. In five or six days, if the threads are loose, withdraw them gently and carefully.

OF JOINTS.

Bring the edges of the wound together by sticking plaster without any delay, keep the part perfectly at rest, bleed, purge, and live very low, to prevent inflammation. Should it come on, it must be met at its first approach by bleeding to as great an extent as the condition of the patient will warrant, and by a blister covering the whole joint. If a permanent stiffening of the joint seems likely to ensue, keep the limb in that position which will prove most useful, that is, the leg should be extended, and the arm bent at the elbow. Wounds of joints are always highly dangerous, and frequently terminate in death.

OF TENDONS.

Tendons or sinews are frequently wounded and ruptured. They are to be treated precisely like any other wound, by keeping their divided parts together. The tendon which connects the great muscle, forming the calf of the leg, with the heel, called the tendon of Achilles, is frequently cut with the adze, and ruptured in jumping from hights. This accident is to be remedied by drawing up the heel, extending the foot and placing a splint on the *fore part* of the leg extending from the knee to beyond the toes, which being secured in that position by a bandage, keeps the foot in the position just mentioned. The hollows under the splint must be filled up with tow or cotton. If the skin falls into the space between the ends of the tendon, apply a piece of sticking plaster, so as to draw it out of the way. It takes five or six weeks to unite, but no weight should be laid on the limb for several months.

FRACTURES.

Fractures are known by the sudden and severe pain, —by the misshapen appearance of the limb,—sometimes by its being shortened,—by the patient being unable to move it without excruciating pain,—*but most certainly*, by grasping the limb above and below the spot where the fracture is supposed to exist, and twisting it different ways, when *a grating* will be felt, occasioned by the broken ends of the bone rubbing against each other. If the swelling, however, is very great, this experiment should not be made until it is reduced.

OF THE BONES OF THE NOSE.

The bones of the nose, from their exposed situation, are frequently forced in. Any smooth article that will pass into the nostril should be immediately introduced with one hand, to raise the depressed portions to the proper level, while the other is employed in molding them into the required shape. If a violent inflammation follows, bleed, purge, and live on a low diet.

OF THE LOWER JAW.

This accident is easily discovered by looking into the mouth, and is to be remedied by keeping the lower jaw firmly pressed against the upper one, by means of a bandage passed under the chin and over the head. If it is broken near the angle, or that part nearest the ear, place a cushion or roll of linen in the hollow behind it over which the bandage must pass, so as to make it push that part of the bone forward. The parts are to be confined in this way for twenty days, during which time, all the nourishment that is taken should be sucked between the teeth. If in consequence of the blow, a tooth is loosened, do not meddle with it, for if let alone it will grow fast again.

OF THE COLLAR BONE.

This accident is a very common occurrence, and is known at once by passing the finger along it, and by the swelling, &c. To reduce it seat the patient in a chair, without any shirt, and place a pretty stout com-

press of linen made in the shape of a wedge, under his arm, the thick end of which should press against the armpit. His arm bent to a right angle at the elbow, is now to be brought down to his side, and secured in that position by a long bandage, which passes over the arm of the affected side and round the body. The forearm is to be supported across the breast by a sling. It takes from four to five weeks to re-unite. By the forearm is meant that part of it which reaches from the elbow to the wrist. The arm extends from the shoulder to the elbow.

OF THE ARM.

Seat the patient on a chair, or the side of a bed, let one assistant hold the sound arm, while another grasps the wrist of the broken one and steadily extends it in an opposite direction, bending the forearm a little to serve as a lever. You can now place the bones in their proper situation. Two splints of shingle or stout pasteboard, long enough to reach from below the shoulder near the elbow, must then be well covered with tow or cotton, and laid along each side of the arm and kept in that position by a bandage. The fore-arm is to be supported in a sling. Two smaller splints may for better security be laid between the first ones, that is, one on top, and the other underneath the arm, to be secured by the bandage in the same way as the others.

OF THE BONES OF THE FOREARM.

These are to be reduced precisely in the same way, excepting the mode of keeping the upper portion of it steady, which is done by grasping the arm above the elbow. When the splints and bandage are applied, support it in a sling.

OF THE WRIST, &c.

This accident is of rare occurrencc. When it does happen the injury is generally so great as to require amputation. If you think the hand can be saved, lay it on a splint well covered with tow; this extends beyond the fingers; place another splint opposite to it lined

with the same soft material, and secure them by a bandage. The hand is to be carried in a sling.

The bones of the hand are sometimes broken. When this is the case, fill the palm with soft compresses or tow, and then lay a splint on it long enough to extend from the elbow to beyond the ends of the fingers, to be secured by a bandage as usual.

When a finger is broken, extend the end of it until it becomes straight, place the fractured portion in its place, and then apply two small pasteboard splints, one below and the other above, to be secured by a narrow bandage. The top splint should extend from the end of the finger over the back of the hand. It may sometimes be proper to have two additional splints for the sides of the fingers.

OF THE RIBS.

When, after a fall or blow, the patient complains of a pricking pain in his side, we may suspect a rib is broken. It is ascertained by placing the tips of two or three fingers on the spot where the pain is, and desiring the patient to cough, when the *grating* sensation will be felt. All that is necessary is to pass a broad bandage round the chest, so tight as to prevent the motion of the ribs in breathing, and to observe a low diet.

OF THE THIGH.

A grating sensation is felt, the limb is shortened, the part is painful and the limb unable to support the weight of the body; when the neck of the bone is fractured, the leg is much shorter, and the toes turned inwards. The limb must be bent a little towards the body; one assistant is to grasp the limb round the groin and hold it steady, while another firmly holds the limb above the knee, and gently but firmly extends the thigh: the ends of the bones will by these means be reduced or brought together. Let the splints be prepared, one of sufficient length to reach from the hip joint down to the knee, the other on the inside of the thigh to a little below the knee. Thick pasteboard cut to a proper taper, is the best material for splints, for when dipped in water it

takes the shape of the limb, and when dry remains a firm and even support. The splints should be lined with tow or other soft material. The best bandage for broken limbs is made as follows. Take a strip of muslin about four inches wide, of sufficient length to reach from the upper and inner portion of the thigh to the knee, a sufficient number of cross-pieces or tails to cover as much of the part as is requisite. Each of the cross-pieces is to be proportioned to the circumference of the thigh; the upper tails will be twice the length of the lower. After laying the first mentioned strip upon a table, fix the upper end of it in some way. Then begin laying the upper tails across it, and proceed with placing the rest; each tail must be long enough to extend about two inches beyond the opposite one when they are both applied. The tails being all arranged across the single strip, are to be stitched in that position with a needle and thread. Then place the bandage under the thigh so that the longitudinal band shall come directly under the thigh; each tail should lap a little over the next upper one before it is fastened to the band. Apply the splints each side of the limb, and bring the lower tail first over the thigh, and cover that by the next upper one, and in this way proceed upwards till all the cross pieces are applied, the uppermost one of which should be fastened with a pin. The advantage of this many-tailed bandage is, that it may be removed and reapplied without disturbing the limb. Place the limb upon a pillow and direct the patient to lie a little on the fractured side, with the leg and foot bent upon the thigh and supported by a pillow.

It will add greatly to the comfort of the patient to rest his limb upon a double inclined plane, one part extending from the hip to the back of the knee, the other from that point to beyond the heel. It may be made of smoothly planed boards fastened together and braced at such an angle that when covered with a pillow or other soft material, the limb will rest comfortably, slightly bent. A trough made at the same angle, just wide enough for the thigh and leg with the bandage and cushion, would be still more comfortable to the patient.

It is very rare that the sufferer escapes without a shortening of the limb under the best treatment.

OF THE KNEE-PAN.

This accident is easily ascertained on inspection. It may be broken in any direction, but is most generally so across or transversely. It is reduced by bringing the fragments together, and keeping them in that position by a long bandage passed carefully round the leg, from the ankle to the knee, then pressing the upper fragment down so as to meet its fellow (the leg being extended), and placing a thick compress of linen above it, over which the bandage is to be continued.

The extended limb is now to be laid on a broad splint, extending from the buttock to the heel, thickly covered with tow to fill up the inequalities of the leg. For additional security, two strips of muslin may be nailed to the middle of the splint, one on each side, and passed about the joint, the one below, and the other above, so as to form a figure of eight. In twenty or thirty days the limb should be moved a little to prevent stiffness.

If the fracture is through its length, bring the parts together, place a compress on each side, and keep them together with a bandage, leaving the limb extended and at rest. Any inflammation in this, or other fracture, is to be combated by bleeding, low diet, &c., &c.

OF THE LEG.

From the thinness of the parts covering the principal bone of the leg, it is easy to ascertain if it is broken obliquely. If, however, the fracture be directly *across*, no displacement will occur, but the pain, swelling, and the *grating sensation*, will sufficiently decide the nature of the accident.

If the fracture is oblique, let two assistants extend the limb, while the broken parts are placed by the hand in their natural position. Two splints that reach from a little above the knee, to nine or ten inches below the foot, having near the upper end of each four holes, and a vertical mortice near the lower end, into which is fitted a cross piece, are now to be applied as follows:

Lay two pieces of tape, about a foot long, on each side of the leg, *just below the knee-joint*, and secure them there by several turns of a bandage; pass a silk handkerchief round the ankle, across it on the instep, and tie it under the sole of the foot. The two splints are now placed one on each side of the leg, the four ends of the piece of tape passed through the four holes and firmly tied, and the cross-piece laid in the mortice. By tying the ends of the handkerchief to this cross-piece the business is finished.

If the fracture is *across*, and no displacement exists, apply two splints of stout pasteboard, reaching from the heel to the knee, and well covered with tow, one on each side of the leg, securing them by a bandage passing round the limb and outside the splints.

OF THE BONES OF THE FOOT.

The bone of the heel is sometimes, though rarely, broken. It is known by a crack at the moment of the accident, a difficulty in standing, by the swelling, and the grating noise on moving the heel. To reduce it, take a long bandage, lay the end of it on the top of the foot, carry it over the toes under the sole, and then by several turns secure it in that position.

The foot being extended as much as possible, carry the bandage along the back of the leg, above the knee, where it is to be secured by several turns, and then brought down on the front of the leg, to which it is secured by circular turns. In this way the broken pieces will be kept in contact, and in the course of a month, or six weeks, will be united.

Fractures of the foot, toes, &c., are to be treated like those of the hand and fingers.

DISLOCATIONS.

Dislocations, or bones being out of joint, are known by the deformity of the joint when compared with its fellow,—by the pain and inability to move the limb,—by its being longer or shorter than usual, and by the impossibility of moving it in particular directions.

Jaw.—If the jaw is out of joint, the operator must

put linen cloths round his thumbs, then put them in the patient's mouth on the joints, and push down the ends of the bone at the same time with his fingers under his chin, pull a little forwards so as to open the joints, then lift it into its own place. Take care that the thumbs are not bitten as the jaw goes into its place.

NECK.—If the neck is out of joint, the operator must immediately place his knees against the patient's shoulder, and pull his head upwards, so as to bring the bone into its place.

SHOULDER.—If the shoulder is out of joint, a rope may be stretched on a level, or a board may be set edge upwards just so high as the patient can stand up and lay his arm over it; let it come close to his body; let the operator take hold of his arm, and pull it forward, and bear down; let the patient settle downwards at the same time, and it will generally go into its place; or the end of a board may be hollowed out like the part of a circle, so as to lay to the body under the arm; then the arm lifted and extended; the arm, hand and wrist may be lashed fast to the board,—and then bear it gently down, and it will lift the joint into its place. These directions suppose the bone to have fallen below the joint, which is generally the case; but if otherwise, that, and almost all other bones out of joint or broken, must be set in the common form, by steadying the body and pulling at the limb, until it is so far extended as to replace the joints or fractures.

ELBOW.—Extension is to be made by assistants pulling gradually in opposite directions, while the operator returns the bones into their proper place. Afterwards the arm must be bent and suspended for some time with a sling about the neck. Proceed in the same manner, in case of disjointed wrists or fingers.

THIGH.—When the thigh bone is out of joint, the patient must be laid on his back, and fastened down; extension must be made by means of slings, fixed about the bottom of the thigh, a little above the knee. While the extension is making, push the head of the bone outward till it enters the socket. If the dislocation is out-

ward, lay the person on his face, and during the extension, push the head of the bone inward.

Knee Joint.—Extension is to be made upwards by the thigh, and downwards by the leg, and the bones replaced by pressure with the hand. So likewise for the ankle joint.

OF COMPOUND ACCIDENTS.

Having spoken of the treatment to be pursued for a bruise, wound, fracture and dislocation, as happening singly, it remains to state what is to be done when they are united.

We will suppose that a man has been violently thrown from a carriage. On examination, a wound is found in his thigh bleeding profusely, his ankle is out of joint with a wound communicating with its cavity, and the leg broken.

In the first place stop the bleeding from the wound in the thigh; reduce the dislocation next; draw the edges of the wounds together with sticking plaster; and procure a surgeon as quickly as possible.

If, instead of a wound, fracture and dislocation, there is a concussion or compression of the brain, a dislocation and fracture, attend to the concussion first, the dislocation next, and the fracture the last.

RUPTURE, OR BURST.

When these tumors become painful they must be reduced to prevent strangulation, which, without the assistance of a skillful surgeon, would prove fatal.

Directions for the reduction of the tumor.—Place the patient on the back, and raise the foot of the bed twenty or thirty inches higher than the head. Cover the tumor with one or both hands, and press upon it uniformly, moderately, but with gradually increasing firmness. The power should generally have an upward direction: but may be occasionally varied a little from right to left. Persist in this effort, if the patient will submit to it, for half an hour; but if it fail of success, bleed the patient, while standing erect, even to faintness, and while in that state renew the effort to reduce

the tumor as before. Should this prove ineffectual, cover the tumor with pounded ice, or with flannel dipped in cold water, made still colder by the addition of as much salt as it will dissolve; or, if this process fails, or ice or cold water is not at hand, it may be well to try the dropping slowly of Ether, (No. 21,) upon the part, blowing it with a pair of bellows or the mouth for some time. The position of the patient to be as first directed. If the reduction be not effected by this course, give a clyster of tobacco, made by boiling a piece of tobacco of the size of a large walnut in a pint of water. Repeat this clyster every thirty minutes, until the muscles of the whole system become relaxed; then elevate the lower extremities, and make a persevering, last effort to reduce the rupture. Apply a truss, to prevent a second descent.

LOCK JAW.

Give opium in large quantities, as two teaspoonsful of the tincture, (laudanum,) every half hour. When the patient can no longer swallow, inject laudanum, a tablespoonful in warm water, every hour, and let it be retained as long as possible.

With the first dose of laudanum, give ten grains of calomel, and follow it every six hours by a dose of five grains, till the mouth is affected. Use warm and cold bathing successively. If the disease proceed from a wound, enlarge it pretty extensively, and pour into it hot spirits of turpentine, or burn the wound with an iron brought to a white heat.

MORTIFICATION.

From what has already been stated, it is evident, that in treating wounds, &c., as well as diseases, one great and important indication is to repress excessive inflammation, which, if allowed to proceed to a certain point, sometimes produces mortification or the death of the parts.

Whenever, therefore, from the violence of the fever, heat, pain, redness and swelling, you are fearful of its ending in this way, bleed, purge, &c., to as great an

extent as the patient can bear. If, however, the fever and pain suddenly cease, if the part which before was red, swollen and hard, becomes purple and soft, abandon *at once* all reducing measures, lay a blister over the whole of the parts, and give wine, porter, bark, &c., freely, and without delay. If the blisters do not put a stop to the disease, and the parts become dead and offensive, cover them with the charcoal or fermenting poultice until nature separates the dead parts from the living, during which process a generous diet, bark, &c., must be allowed.

There is a particular kind of mortification which comes of itself, or without any apparent cause. It attacks the small toes of old people, and commences in a small bluish or black spot, which spreads to different parts of the foot. To remedy it, place a blister over the spot, and give two grains of opium, night and morning; taking care to keep the bowels open by castor oil, and to diminish the quantity of the opium if it occasions any unpleasant effects.

In extensive mortifications of the forearm, it is necessary to amputate. This however, should never be done, until by the repeated application of blisters to the sound parts adjoining the mortified ones, they are disposed to separate, which may be easily known by inspection.

CHILBLAINS, OR FROSTED LIMBS.

Symptoms.—Chilblains are painful, inflammatory swellings of a purple or leaden color, to which the hands, ears, nose, feet, &c., are subject on being exposed to severe cold.

Treatment.—Any part of the body when first frost-bitten should be rubbed with snow, then iced or snow water, then cold water, gradually adding warmth to the part. Should this not be done and the other symptoms follow, the diseased parts should be rubbed with stimulating substances, such as Opodeldoc, (No. 23,) Spirits Turpentine, Volatile Liniment, Spirits Camphor, (No. 26.) Wheat or rye flour mixed up with molasses to form a fermenting poultice, and bound

upon the limbs, greatly relieves the disease. Should ulceration ensue, the sores should be kept clean and dressed with Basilicon, (No. 30.) Should the parts be so badly frosted as to turn black, they should be poulticed in the manner mentioned above until the dead parts seem to be separating, then apply the ordinary poultice of crumbs of bread or Indian meal until they heal.

TO REMOVE MOTES AND FOREIGN PARTICLES FROM THE EYE.

If the substance can be seen upon the eyeball, remove it with a piece of paper rolled up and softened in the mouth. If it is out of sight, take hold of the eyelashes with the thumb and finger and then with a large needle or other slender article, press upon the center of the eyelid and turn it over. The offending substance will be seen usually on the eyelid and may be removed as mentioned above. Particles of sand or dust may be washed out by a syringe or by the assistant's filling his mouth with water and spurting it into the eye.

Blacksmiths, cutlers and other artificers in iron and steel are very liable to the lodgment of small sharp particles of metal in the eye. They enter with great force the coats of the eye, and if suffered to remain produce inflammation, ulceration and very often a loss of the eye. If a magnet will not remove the troubler, you must take the sharp point of a small penknife or a large needle, and with a steady hand dislodge the particle from the coats of the eye; considerable force is often necessary to effect this. Application of cold water by folded linen will generally be necessary to subdue the consequent inflammation.

Inflammation of the eyelids will occasion a sensation like dirt in the eye and may be detected upon turning up the lid by the plush-like appearance of the lining membrane.

SORE EYES,

When first inflamed, may be frequently bathed in cold water, or equal parts of spirit and water; cloths

dipped in either may be laid on, especially on going to bed at night. A dose of Salts, (No. 8,) or of Cream of Tartar, (No. 10,) should be given every other night. After two or three days of such treatment, make use of the eye-water. (See *Recipes*.)

BURNS AND SCALDS.

Dissolve as much Alum, (No. 43,) as the water will take up, dip linen or cotton rags in it, and lay upon the burn, and repeat it as the cloths get dry. Equal parts of linseed oil and alum water, or lime water with cotton is a good dressing. This may be followed, after a few days, by basilicon spread upon linen or cotton cloth. It is generally best not to remove the skin from a burn. If the burn is so severe as to take off the skin, the spirits of turpentine may be put upon cotton and applied. The spirits of turpentine, if too severe, may be mixed with as much linseed oil. Should there be chills, twenty drops of laudanum, and a glass of wine, should be administered, and repeated, if the chills continue, to support the system. When the healing is well commenced, you may dress the ulcers with Turner's Cerate, (No. 29.)

FELONS.

A felon is an inflammation that occurs at the end of the fingers or toes, and is exceedingly painful and very much disposed to form matter. There are several kinds, varying chiefly in the depth to which the inflammation extends. In the deeper seated forms the pain is very distressing, extending up the limb and preventing sleep. Sometimes there will be little swelling of the affected finger, but a great deal in the hand and about the wrist.

Treatment.—With a lancet or penknife cut down at one stroke to the bone, lengthwise of the finger or toe affected, as soon as the disease is evident. Avoid cutting the arteries which are upon each side of the fingers and toes. Apply a flaxseed poultice, or of any other softening article. This course will give immediate relief and save the bones.

CASES WHICH MOST STRONGLY REQUIRE BLEEDING

Are violent falls or bruises, especially when the head or breast is much affected; in pleurisy fever likewise. Bleeding is oftentimes advantageous in other inflammatory fevers. As the loss of blood has a very debilitating effect, it ought to be avoided in all cases attended with much weakness. In bleeding tie a garter moderately tight round the arm, two inches above the elbow; after the veins have filled it is generally best to open the one that appears the largest. The arteries, which are known by their pulsation, lie below some of the veins, and ought to be carefully avoided. If you feel carefully in the bend of the arm, nearest to the under side, you can discover the beating, and will endeavor of course not to open a vein directly over it. After bleeding, put a little lint on the opening, and bind it up with any soft bandage.

Note.—Bleeding should not be resorted to *immediately* after a fall, while the pulse is feeble, and the countenance pale, but some hours after, when the system recovers from the shock, and the pulse rises.

AMPUTATION.

It is not very frequently necessary to amputate a limb on board of ship, but as such cases have occurred, particularly on whaling voyages, I venture to give some directions for the operation.

When a limb is crushed, the arteries and other soft parts lacerated, or a fracture of the bones with a laceration of the flesh by the bone coming through, amputation, in most cases, is imperiously demanded. Yet I have known some cases of fracture and laceration most happily treated by ship-masters without amputation. But should mortification threaten, there is no alternative.

Operation.—Having fixed on the part where the operation is to be performed, let the operator take a piece of paper of sufficient length to encircle the limb, and four or five inches in width, and apply it around the limb so as to obtain the exact measure, and all the

superfluous length should be cut off. It should then be folded, and the ends of the paper laid together upon the table, and a semicircular arc drawn with a pair of dividers by placing one leg of the dividers upon the middle of the lower side of the paper. The paper cut off upon this line will form two equal semicircles meeting at angles. Apply the paper, thus cut, again to the limb, and mark with ink or crayon the two semicircles for the flaps.

If the thigh is to be amputated, the angles should in general be on the inner and outer sides; if the leg, one angle should be in front, the other on the back part of the leg; if the forearm, the angles should be formed one over one bone, the other over the other bone, that is, on the inner and outer edges, as the hand is presented with the palm upward, on account of covering the bones handsomely with the flaps. In amputating above the elbow, the angles and flaps may be adapted to the circumstances of the case or to the convenience of the operator, who will always find it most convenient to stand so as to have his left hand towards the upper part of the limb. Having everything in readiness, fold or twist up a pocket handkerchief and tie it loosely above the knee or elbow of the limb to be amputated; pass under it a strong stick or other convenient article, about ten or twelve inches long, to twist it up sufficiently to compress the artery and prevent its bleeding, then, whilst an assistant draws up the skin so as to straighten it moderately, the operator fixes his knife on the side farthest from him at the angle where the two semicircular lines meet; with the edge of the knife, turned obliquely upward, he cuts in the direction of the line through the skin, fatty substance, and red flesh or muscles, down to the bone, with repeated strokes. Thus having divided one-half of the soft parts of the limb he passes his hand above the limb, fixes the point of his knife on the angle where he began and follows the line upon the upper side of the limb till it meets his first incision. He will then have two semicircular flaps composed of all the soft parts connected by their natural adhesions; these are to be turned back by a re-

tractor made by slitting a piece of muslin so that the bone will pass into the slit and the flaps can be drawn up as far as circumstances will permit. The bone should be sawed off as high up as possible. If the arteries are seen they should be drawn out with a hook, or forceps, and tied with a strong silk or linen waxed thread. A surgeon's knot is formed by passing the thread over the loop the second time before tying. It will be best then to pass it over again as in the ordinary "hard knot." If the arteries are not seen, the assistant must slacken the handkerchief a very little, when the blood will spurt and show their position. After the arteries are secured, the flaps are to be brought together as exactly as possible, and secured by strips of adhesive plaster from half an inch to an inch in width, according to the size of the limb, and sustained by compresses of lint and bandages around the limb. If the forearm or the leg be amputated, the flesh between the bones should be carefully separated, and the retractor must be made with two slits. If the flaps are marked out by the paper as above described, they will come together with mathematical exactness, whatever the size of the limb. The fingers and toes may be amputated in the same manner. The ligatures upon the arteries should be left long enough to come out at the angles of the incision beyond the dressings, and be tied sufficiently hard to cut the inner coat of the artery. If possible, the dressings should never be removed before the fourth day, not reckoning that on which the operation is performed. Even when the dressings are to be taken away, it will frequently be found useful not to remove one strip of plaster, but the stump must be made clean, and any discharge present washed away. In the course of eight days it may be proper, by very gentle force applied to the ligatures, to ascertain whether they are loose. As a general rule, the longer the stump is left the more useful will it be to the patient. The handkerchief ought to be left upon the limb for several days, and the stick at hand so as to be ready for unexpected hemorrhage.

OF PERSONS APPARENTLY DROWNED.

When a person has remained more than twenty minutes under water, the prospect of his recovery is small. We should not too soon resign the unhappy object to his fate, but try every method for his relief, as there are many well attested instances of the recovery of persons to life and health, who have been taken out of the water apparently dead, and remained so a considerable time. In attempting to recover persons apparently drowned, the principal intention to be pursued is, to restore natural warmth, upon which all the vital functions depend, and to excite these functions by the application of stimulants. First strip him of his wet clothes, and dry him well; when he is dried, lay him between two or three hot blankets, and renew them as they grow cold. Rub the patient with warm ashes, or coarse dry cloths, and rub on his wrists and ankles Spirits of Hartshorn, (No. 17;) and frequently apply the same to his nose. You may likewise apply bottles or bladders filled with hot water to his feet and armpits. While these external means of restoring heat to the body are going on, you must inflate the lungs as soon as possible with a pair of bellows, by inserting the pipe into one nostril, while the other nostril and mouth are kept closed, and blowing forcibly; or for want of bellows, you may use a common glyster pipe, or in case of necessity, a common tobacco pipe or quill. Some person should blow through the pipe into one nostril, while the other and the mouth are closed as before. When the lungs are full, press upon the breast, and force the air out again, and then blow as before. Repeat this process for half an hour more. In addition to this method, you may dip a blanket into boiling water, wring it as dry as possible, and wrap the person in it. Repeat this every 15 or 20 minutes for two hours or more. These means ought to be continued for two or three hours at least, even if no signs of life appear. When signs of returning life are apparent, the frictions must be continued, but more gently: when the patient can swallow, he must take some warm spirits; when he is pretty well recovered, put him into bed, in blankets,

and give some warm spirits; if his feet should be cold, wrap them up in warm flannels. Never roll a drowned person upon a cask. What little life the patient may have left will be wholly extinguished by such means.

DIRECTIONS FOR PASSING CATHETERS.

Take the penis of the patient near its head between the finger and thumb of your left hand (standing beside him,) while with your right you introduce the point of the instrument into the urinary passage, its convex side towards the knees; while you push the catheter down the urethra, endeavor at the same time to draw up the penis on it. When you first introduce it, the handle will of course be near the belly of the patient, and as it descends will be thrown farther from it, until it enters the bladder, which will be known by the flow of the urine. If you cannot succeed while the patient is on his back, make him stand up, or place him with his shoulders and back on the ground, while his thighs and legs are held up by assistants. If still foiled, place him again on his back, and when you have got the catheter as far down as it will go, introduce the fore-finger, well oiled, into the fundament, and endeavor to push its point upward, while you still press it forward with the other hand. Force is never, on any account, to be used. Vary your position as often as you please; let the patient try it himself, but always remember it is by *humoring* the instrument, and not by violence, that you can succeed.

DIRECTIONS FOR PASSING BOUGIES.

Take the penis between your finger and thumb, and pass the point of the instrument (which should be well oiled) down the urethra as directed for the catheter; when it has entered three or four inches, depress the penis a little, and by humoring the bougie with one hand and the penis with the other, endeavor to pass it as far as may be wished. The patient himself will frequently succeed, when every one else fails.

APPLICATION OF LEECHES.

The part must be washed with fair water, and if the clothes or bandages have the odor of spirits, or other strong smelling articles, they must be removed. Let the leeches be put into a glass with a little warm water for a few moments, then empty out the water and invert the glass upon the part to be leeched. If they do not bite after a little delay, slightly puncture, with a lancet or any other sharp instrument, the skin where the leeches are to be applied, and try them again. When they have filled themselves they will drop off. Bathe the wounds with warm water, or apply a warm poultice to promote the bleeding.

OF FISTULA.

Symptoms.—An abscess or ulcer in the neighborhood of the fundament, preceded by an inflamed hard swelling, which gives much pain. If there is no communication between the gut and the sore, it is called incomplete, if there is, a complete fistula.

Treatment.—As the tumor is often taken for piles, attention should be paid to distinguish them. In all cases apply twelve leeches to the part, keep the bowels perfectly loose by a diet of rye or Indian mush, and confine the patient to his bed. If, however, the formation of matter cannot be hindered, the swelling must be opened early, and a poultice applied to it, when the disease occasionally heals like any other sore, but nine times out of ten it forms a callous winding abscess, through which (if it is complete) excrements, &c. often pass. When it arrives at this point, nothing but an operation can ever be of any service.

There is another species of fistulous opening, which follows the obstruction, caused by strictures, &c. in the urinary passage. The water not being able to flow through the natural canal, makes its way out between the bag and the fundament, constituting what is called fistula in perineo. It may almost be called an incurable disease; at all events, none but a surgeon can do anything to relieve it.

CORNS AND BUNIONS

Are formed by successive layers of the hardened scarf-skin, usually commencing in a mere point. As successive layers are added to the first, the pressure of the boot or shoe forces down the hardened and horny point upon the inner or true skin. This membrane being exceedingly sensitive becomes much irritated and painful. Those corns which are formed between the toes seem to vary somewhat in their structure, but require the same treatment as the others.

Bunions affect, chiefly, the large joint of the large toes, and seem to consist, under the general hardened covering, of many small indurated points.

Treatment.—Shave off the outside layer until you can perceive the hardened center, then with a sharp pointed knife carefully raise one layer after another until you reach the true skin. This, with care, may be done without drawing blood. When the corns are very tender, it may be necessary to remove portions, at intervals of two or three days, until the whole is removed. It may then be covered with a small adhesive plaster.

OF SWALLOWING POISON.

GENERAL SYMPTOMS OF POISONING.

A PERSON may be supposed to be poisoned, if, being in perfect health, he be attacked, after having taken some food or drink, with violent pain, cramp in the stomach, nausea, vomiting, convulsive actions, and a sense of suffocation; or, if he be seized with giddiness, delirium, or unusual drowsiness.

The effects of poisoning may, in most cases, be known and distinguished from natural diseases, or sudden illness, by the following symptoms:

1.—The person, when in a state of perfect health, becomes all at once very ill, sick, with violent pain in the stomach, burning in the throat, and retching. In sudden apoplexy, the stomach and throat are not affected. In cholera and internal inflammations, there is no burning in the throat before vomiting begins. There is also a feverishness not observed at first in poisoning.

2.—The effects of a strong dose of poison usually show themselves in a few minutes, though others, not for some hours. After a meal, or eating, when a person is taken very ill, poisoning may be suspected.

Apoplexy, cholera, and inflammation, which also appear suddenly after eating, may be distinguished as above.

3.—The effects of poisoning not only appear suddenly, but increase rapidly and alarmingly, after or within an hour, and sometimes prove fatal in a few minutes.

Internal inflammation, diseases of the heart, cholera, plague, apoplexy, and some other diseases, that often end fatally within a few hours, may be distinguished from poisoning, by what is said above, as well as from individual circumstances.

4.—The effects of poisoning most usually increase without intermission of their severity, and are also, for the most part, uniform in kind.

Internal inflammations, and some of the diseases already mentioned, have often the same character, and can only be distinguished by circumstances. Should epidemic cholera be prevalent, very great caution will be necessary, as its attacks very closely resemble symptoms of irritant poisoning, particularly that by arsenic.

WHAT TO DO IN GENERAL.

When it is strongly suspected, from the above symptoms, that poison has got into the stomach, though it be not known what sort of poison, not a moment is to be lost in removing it, by means of the stomach-pump, if one be at hand, and if not, by promoting full and copious vomiting. For this purpose, the most speedy are, the tickling of the back part of the mouth with a feather, and repeatedly thrusting the finger as far back into the throat as possible. When the gullet is much inflamed, however, none of these means can be employed. Other means to be used are given in this work.

ACIDS.

Oil of Vitriol,—Aquafortis,—Spirit of Sea Salt,—Oxalic Acid.

Symptoms.—A burning heat in the mouth, throat and stomach,—stinking breath,—an inclination to vomit, or vomiting of various matters mixed with blood,—hiccups,—costiveness or stools more or less bloody,—pain in the belly, so great that the weight of a sheet cannot be borne,—burning thirst,—difficulty of breathing,—suppression of urine, &c.

Remedies.—Mix an ounce of calcined magnesia with a pint of water, and give a glassful every two minutes. If it is not on hand, use flaxseed tea, rice water, or water alone in large quantities, until the former can be procured. If it cannot be obtained, dissolve an ounce of soap in a pint of water, and take a glassful every two minutes; chalk or whiting may also be taken by

the mouth, and clysters of milk be frequently injected. If the patient will not vomit, put him in the warm bath, bleed him freely, and apply leeches and blisters over the parts pained. If the cramps and convulsions continue, give him a cup of common tea, with an ounce of sugar, half a teaspoonful of Ether, (No. 21,) and fifteen or twenty drops of laudanum, every quarter of an hour. No nourishment but sweetened rice water is to be taken for several days. In these cases never give tartar emetic, ipecacuanha, or tickle the throat with a feather; they only increase the evil.

ALKALIES.

Caustic Potash,—Caustic Soda,—Hartshorn.

Symptoms.—These substances occasion the same effects as acids, producing dreadful convulsions.

Remedies.—Take two tablespoonsful of vinegar or lime juice in a glass of water at once, follow it up by drinking large quantities of sugar and water. Pursue the same treatment as in poisons from acids.

MERCURY.

Corrosive Sublimate,—Red Precipitate,—Vermilion.

Symptoms.—Constriction and great pain in the throat, stomach and bowels, — vomiting of various matters mixed with blood,—unquenchable thirst,—difficulty of urine,—convulsions.

Remedies.—Mix the whites of a dozen or fifteen eggs with two pints of cold water, and give a glassful every two minutes, with as much milk as can be swallowed, and large doses of ipecacuanha. If after the egg mixture is all taken, the vomiting does not stop, repeat the dose, with the addition of more water. Leeches, the warm bath, blisters, &c., are to be used to reduce the pain and inflammation, as before directed.

ARSENIC.

Symptoms.—These are the same as produced by the mercurial poisons.

Remedies.—Give large quantities of cold sugar and water, until a plentiful vomiting is induced, to assist

which ipecacuanha* may be taken in considerable doses at the same time;† barley, rice water, flaxseed tea, milk, &c., should afterwards be employed. Oil is never to be used in this case until the symptoms have considerably abated, or the poison has been ejected.

COPPER.

The symptoms occasioned by swallowing verdigris are nearly the same as those of the mercurial poisons. The great remedy is large quanties of sweetened water. In addition to this, use all the means recommended for corrosive sublimate, &c.

ANTIMONY.

Antimonial Wine,—Tartar Emetic,—Butter of Antimony, &c.

Symptoms.—Excessive vomiting,—pain and cramp in the stomach,—convulsions, &c.

Remedies.—Encourage the vomiting by sugar and water, and if after a while it does not stop, give a grain of opium in a glass of the sweetened water, every fifteen minutes. To relieve the pain, apply leeches to the stomach, throat, or parts affected.

LUNAR CAUSTIC.

Dissolve two tablespoonsful of common table salt, in two pints of water; a few glasses of this will induce vomiting. If not relieved, drink flaxseed tea, apply leeches, &c., as for acids.

SALT-PETRE.

Pursue the plan recommended for arsenic, omitting the lime water.

LEAD.

Sugar of Lead,—Extract of Saturn,—White Lead,—Litharge,—Minium.

* To render it more active, ten grains of sulphate of zinc may be added to it.

† Equal parts of lime water and sugared water may also be used.

Symptoms.—A sweet astringent taste in the mouth,—constriction of the throat,—pain in the stomach,—bloody vomiting, &c.

Remedies.—Dissolve a handful of Epsom or Glauber salts in a pint of water, and give it at once; when it has vomited him, use sweetened water. If the symptoms continue, act as directed for acids.

OPIUM or LAUDANUM.

Symptoms.—Stupor,—an insurmountable inclination to sleep,—delirium,—convulsions, &c.

Remedies.—Endeavor to excite vomiting by six grains of tartar emetic, or four grains of blue, or thirty of white vitriol. Thrust a feather down the throat for the same purpose. Never give vinegar or other acids, until the poison is altogether or nearly evacuated. After this has taken place, a wine-glassful of lemon juice and water may be taken every five minutes, along with a cup of *very strong* coffee. The coffee, &c., are to be continued until the drowsiness is gone off, which, if it continues, and resembles that of apoplexy, must be relieved by bleeding. Cold water or ice water should be constantly applied to the head. The patient is to be forcibly kept in constant motion, or in pain, by beating with a light slipper or a small rod, until the laudanum has lost its power.

POISONOUS FISH.

Remedies.—An emetic. If it has been eaten some time, give castor oil by the mouth and clyster. After these have operated, twenty drops of ether may be taken on a lump of sugar; vinegar and water as before mentioned.

GONORRHŒA OR CLAP.

SYMPTOMS.—From two to six days, and sometimes two weeks, from an impure connection, an uneasiness is felt about the parts of generation, such as an itching in the glans or head of the penis, and a soreness and tingling sensation along the whole course of the urethra or urinary passage. Soon after, the patient perceives an appearance of whitish matter at its orifice and some degree of pungency upon making water.

In the course of a few days the discharge of matter will increase considerably; will assume most probably a greenish or yellowish hue, and will become thinner, and lose its adhesiveness; the parts will also be occupied with some degree of redness and inflammation in consequence of which the glans will put on the appearance of a ripe cherry, the stream of urine will be smaller than usual, owing to the canal being made narrower by the inflamed state of its lining membrane, and a considerable degree of pain and scalding heat will be experienced on every attempt to make water.

In consequence of the inflammation, it sometimes happens that at the time of passing water there is a slight flow of blood also, owing to the rupture of some blood-vessel.

TREATMENT.—There is no one medicine or combination of medicines that will cure every case of clap. Some patients are exceedingly difficult of cure by all the remedies known. It is not to be expected that every kind of medicine is to be found in a family or ship's medicine chest. It will be perceived that some of the articles mentioned below are not in the *numbered* list at the commencement of this work. The most efficacious treatment of this disease, if commenced within

thirty-six or forty-eight hours of its attack, is as follows. Dissolve sixteen grains of lunar caustic in four ounces or half a tumbler of cold rain or river water, and inject with a *glass* syringe three or four times a day for two days, then dissolve a drachm or a teaspoonful of sugar of lead in a pint of pure water which may be used with a pewter syringe. This is a severe remedy, but it saves time and exposure to strictures. The injection must not be allowed to enter the penis to a greater extent than an inch and a half or two inches. Should the discharge under its use become reddish, so much the better. An increase of the white discharge must also be expected at the first. The bowels must be kept open by salts or cream of tartar. After 48 hours have elapsed from the attack, it will be unsafe to enter on this mode of treatment. Then let the patient take a full dose of Epsom Salts, (No. 8,) or Cream of Tartar, (No. 10.) Abstain from all fermented and spirituous liquors, all animal food, mustard, pepper and other stimulating substances. Keep as quiet both in body and mind as circumstances will permit. Let the penis be covered with a linen or muslin rag dipped in a solution of Sugar of Lead, (No. 42,) an even teaspoonful to a pint of water. Mix equal parts of Balsam Copaiva, (No. 24,) and Spirits of Nitre, (No. 20,) and about one eighth part of Laudanum, (No. 16,) give one teaspoonful of water or molasses three times a day, keep the bowels open with salts or cream of tartar at least as often as every other day. Let the patient drink freely of flaxseed tea or a solution of gum arabic. One of the most successful remedies in the author's own experience, either for recent cases, or for those of long standing, is sulphur and cream of tartar each two large teaspoonsful, Powdered Nitre, (No. 50,) one large spoonful; mix. Dose, one teaspoonful in water thrice a day. The addition of a teaspoonful of powdered cubebs to each dose, if they can be procured, renders the mixture much more efficacious. The infusion of uva ursi, &c., as described in the Secondary List, is an excellent addition to any of the remedies for gonorrhea. Injections of sugar of lead, and of white vitriol, and other irritating articles, except within the

first twenty-four hours, should not be used until the disease has continued at least two weeks, lest they occasion the swelling of the testicles.

It frequently happens in the clap, as also in the venereal disease, or pox, that there is much inflammation, and sometimes the foreskin is so inflamed and swollen that it will not pass back, and it also sometimes gets drawn back and so inflamed and swollen that it will not pass forward. If under such circumstances the inflammation is high, bleed the patient to the extent of a pint or more, purge him thoroughly with salts, apply cold poultices, or cold washes, and let him take an even teaspoonful of Salt Petre, (No. 50,) in a tumbler of flaxseed tea, three times a day. This being done, occasional attempts should be made to bring the skin over to its proper place. If it is drawn back behind the head of the penis, the penis should be taken between the first and second fingers of each hand, and gentle pressure made by both thumbs for a few moments upon the head of the penis while the skin is drawn up at the same time by the fingers. Gradually the fluids will be pressed out of the head, the swelling lessened, and the foreskin will come back to its place. If all these means fail, the skin should be slit with a sharp instrument, so as to bring it to its proper place, and the wound poulticed for two or three days, and afterwards washed with Lint, (No. 35,) and the Ointment, (No. 29.)

CHORDEE.

When the inflammation of gonorrhœa prevails in a very high degree, it prevents the extension of the urethra during an erection, so that the penis is, at that time, curved downwards, with great pain. The pain is much increased if an attempt is made to raise the penis towards the belly, and the stimulus occasions it often to be erected, particularly when the patient is warm in bed, and so deprives him of sleep.

Treatment.—If this symptom arise during the inflammatory stage, bleeding from the arm is often of service, but if five or six leeches can be applied along the under surface of the penis, and allowed to bleed

freely, the relief is much greater. Relief may often be obtained by exposing the penis to the steam of hot water. Cold water also is equally useful.

Poultices, containing Spirits Camphor, are a good application. The patient may take twenty-five to thirty drops of laudanum, and a teaspoonful of spirits camphor in water. This on going to bed will generally prevent an attack. When the chordee continues after the inflammation has subsided, the under surface should be freely rubbed twice a day with Mercurial Ointment, (No. 31.) Chordee is often longer going off than any other consequence of gonorrhœa.

SWELLED TESTICLES,

Are a very common symptom attending a gonorrhœa. The inflammation probably arises from its sympathizing with the urethra. The swelling of the testicle coming on either removes the pain in making water, and suspends the discharge, which does not return until the swelling begins to subside; or else the irritation of the urethra, first ceasing, produces a swelling of the testicle, which continues till the pain and discharge return, thus rendering it doubtful which is the cause and which the effect.

Treatment.—Rest is the best remedy, and the horizontal position of the body is easiest. At all events the testicles must be well suspended. Treat the case as inflammation in general, by bleeding, purging with Epsom Salts, applying cloths wrung out in hot water, and by poultices. Apply from six to twelve leeches if they can be procured, and a poultice after they fall off. Sometimes a single vomit of Tartar Emetic, (No. 1,) will effect a surprising change for the better. If these means fail, rub the whole bag with Mercurial Ointment, (No. 31.) This may be done also occasionally if hardness remains after the inflammation has subsided. If the patient suffers much pain, thirty to forty drops of Laudanum should be administered.

In all cases of venereal disease, the greatest regard should be paid to cleanliness. The penis should be washed several times a day in water.

GLEET.

By the term gleet is meant 'a continued running or discharge after the inflammatory symptoms of a clap, for some time, have ceased. It is unattended with pain, or scalding in making water, &c. The use of Balsam Copaiva, steadily persevered in three times a day in the dose of thirty to forty drops, using at the same time the tonic solution mentioned under *Recipes*, (p. 30,) will relieve many cases. Injections of Sugar of Lead or White Vitriol, as aforementioned, are here appropriate remedies, and must be persevered in.

The mixture of Sulphur, Cream of Tartar, Saltpetre and Cubebs, as directed for the clap, will be found of great service. The uva ursi, as directed in the description of that article in the first part of this book, by itself or in connection with this mixture, is a superior remedy. Cold bathing is useful aso. If these means fail, take a middling sized bougie, oil it well with Balsam Copaiva, and pass it up the passage twice a day. Gleet is a most troublesome disease to get rid of, and requires great care and perseverance.

STRICTURE.

A stricture of the urinary passage does not always arise from venereal diseases. Going out of a warm into a cold situation, drinking, and other kinds of intemperance, will often bring on an irritable state of the canal attended with a spasmodic action of the strictured part, an increased difficulty of voiding urine, and even a total stoppage of the fluid. The patient makes repeated efforts to relieve himself, but hardly a drop of urine is discharged. In the meanwhile the bladder becomes filled and ascends above the bones in front of the belly, becomes hard and painful, fever comes on; the countenance looks red, the brain becomes affected, and circumstances assume an extremely urgent appearance.

Treatment.—Bleed the patient immediately if nothing in his constitution or age forbid. It may even be proper to repeat the operation. He should be put into

a warm bath, and cloths wrung out in hot water laid upon the lower part of the bowels and continually repeated. From half a teaspoonful to a teaspoonful of Spirits Nitre, (No. 20,) should be taken once in two hours, and hot Cream of Tartar beverage pretty freely. If leeches can be procured, six or eight should be applied between the bag and the fundament. Great benefit can be derived from fifty to sixty drops of Laudanum, (No. 16,) together with an anodyne injection (see page 31,) containing one teaspoonful of Laudanum.

When such measures fail in enabling the patient to empty his bladder, and the bladder becomes more and more distended, an immediate attempt should be made to introduce a small flexible elastic gum catheter, through the stricture or strictures into the bladder, which may be frequently accomplished when due care, perseverance and gentleness are not neglected.

Sometimes when a small catheter cannot be introduced a very fine bougie may be, and being withdrawn from the bladder, the urine follows and is discharged. For directions how to introduce these instruments, see p. 124.

When all these remedies prove unavailing, and the danger arising from retention of urine continues to increase, the only remaining resource is to puncture the bladder. The patient must die if the urine is not discharged. Possibly he may live, even if the operation is performed by an unscientific hand. It seems to me justifiable, if no professional aid can be obtained, in this extreme case, for a friend to puncture the bladder with a lancet, a pen-knife, or any other instrument. The instrument used may be pushed obliquely downwards and backwards one inch above the bone, on the lower part of the belly, and an oiled catheter being all ready, it must be immediately introduced through the wound and allowed to remain. It should be withdrawn once in two days to cleanse it. The other remedies may then be continued with more hope of success. When the urine passes naturally, the catheter must be removed from the wound, and the wound allowed to heal.

SYPHILIS, OR VENEREAL DISEASE.

Symptoms.—This disease, known more commonly by the name of pox, makes it appearance from three days to six weeks, after exposure, in the form of chancre, more commonly upon the head of the penis, foreskin, or the fraenum or bridle, sometimes on the body of the penis, and sometimes on the forepart of the bag. It always commences with a chancre. A chancre begins with an itching in the part. When the inflammation is upon the head of the penis, a small pimple full of matter generally arises without much hardness or seeming inflammation, and with very little swelling. When chancres occur on the fraenum, or particularly upon the foreskin, much more inflammation soon follows, attended with effects more extensive and visible. The itching is gradually converted into pain. In some cases the surface of the foreskin is excoriated and afterwards ulcerates; while in other cases a small pimple or abscess appears as on the glans or head, and then turns into an ulcer.

When the chancre makes its appearance upon the skin of the body of the penis, it is in the form of a pimple which commonly forms a scab in consequence of evaporation. The first scab is generally rubbed off, after which a second still larger is produced. A considerable inflammation of the glans and foreskin often follows with much swelling, preventing the foreskin from being drawn back, as described under the head of gonorrhœa. A chancre or venereal ulcer appears excavated, has a thickened base, and is foul with matter.

Treatment.—Let the pimples or chancres be thoroughly cauterized either with Blue Vitriol, (No. 40,) or by lunar caustic, and the burning be repeated once or twice. A full dose of salts should be taken in the next place. After their operation take from *twelve* to *fifteen* drops of Mercurial Solution, (No. 19,) in half a tumbler of sweetened water twice a day, or a Mercurial pill, (No. 7,) morning and night. Should the gums become tender, suspend the mercurial medicines, take a dose of salts, and after two or three days proceed as before. If

the pills produce purging, take six to ten drops of Laudanum, (No. 16,) with each dose. The mercury must be continued at least one week after all is healed.

The same careful attention to diet mentioned in the treatment of gonorrhœa should be observed in this disease.

In the case of chancres that are obstinate, dissolve a piece of blue vitrol in a little water, and touch them with that once a day, or with a drop of the Mercurial solution, (No. 19.) Let the chancres be dressed with dry Lint, (No. 35,) or lint dipped in a solution of white vitriol several times a day. All obstinate venereal ulcers are to be treated in the same way as chancres. In case of bubo or hard swellling in the groin, while taking the Mercurial Pills or solution, (No. 19,) rub a small piece of Mercurial Ointment, (No. 31,) twice or three times a day, upon the swelling and the inside of the thigh as low down as the knee. Subdue the inflammation early, before matter has formed, by purgatives of salts or seawater, by cold applications to the bubo, as salts laid on in a small bag, and frequently moistened with cold water. Subsist on a light diet, as broths, gruel, sago, barley, rice, puddings, &c. Should the swelling not go off in the course of two or three weeks, but become hard and painful, it will be necessary to poultice it, and endeavor to bring it to a head. After it becomes perfectly soft, and the matter is felt to fluctuate in the tumor, and it is pointed, take the lancet and lay it open, so that the matter may be discharged: lay a little lint over the orifice, and poultice it until it subsides, then dress with Basilicon Salve, (No 30.) Should the sore be foul, and not heal kindly, mix Red Precipitate, (No. 39,) with the salve, and dress with that.

Venereal warts are sometimes very troublesome. When they make their first appearance, touch them once or twice a day with Blue Stone, (No. 40,) and mix a large proportion of Red Precipitate with Basilicon Salve; spread it upon a little lint or rag, and apply it directly to the wart; dress once a day. In venereal sore throat, the principal dependence is on the exhibi-

tion of mercury internally. After the mercury has been given some time, and the ulcers do not heal, make a strong decoction of White Oak Bark, or if that cannot be obtained, of the Bark, (No. 11,) and let the patient gargle his throat often with that. Should the ulcers be high edged and foul, dissolve a small piece of Blue Stone in a little water; make a swab by winding tow around the end of a stick, dip it into this solution, and touch the ulcers once or twice a day. The principal dependence in the cure of venereal nodes or enlarged bones, is likewise to be placed on the internal use of Mercurial Pills or solution. It should be continued until the mouth becomes sore, and the tenderness of the gums should be kept up for two or three weeks. Where there is much pain and restlessness during the night, give 40 drops of laudanum, (No. 16.) It often happens that after a person has had the venereal disease several times, there appears a troublesome eruption on the foreskin and glans penis. For this take a teaspoonful of Sugar of Lead, (No. 42,) and the same quantity of Calomel, (No. 3;) add half a pint of soft water, shake it thoroughly every time of using, and wash four times a day. This wash used once or twice a day assists much in the cure of chancres. Venereal ulcers in the nose are to be treated much in the same way as venereal sore throat. If they do not yield to the use of mercury until the mouth becomes tender, which should be kept so for two weeks, inject into the nose the solution of Sugar of Lead and Calomel twice a day. In all the above cases, after the use of mercury, if there is much debility, the bark, (No. 11,) should be taken three or four times a day, until appetite and strength return.

Preventives.—The newspapers often contain advertisements of preventives of venereal diseases. These are an imposition and contrary to good morals. There is no preventive but total abstinence known to medical men, unless it be a recipe that Solomon gives in Proverbs, chap. v., verse 15th to the end.

DROPSY OF THE BAG.

SYMPTOMS.—A collection of water, which is first perceived at the *bottom* of the bag increasing in size as it advances upwards, and forming a tumor of the shape of a pear. If examined as directed for dropsy of the belly, the *wavy* motion may be felt, and if a candle be placed *behind* it, it becomes partly transparent.

Distinguish it *from a rupture* by the tumor not swelling when the patient coughs,—by the tumor having commenced at the *bottom* of the bag, &c.

From a diseased testicle, by its softness,—the natural color of the skin,—absence of pain,—transparency, &c., &c.

TREATMENT.—When it is first discovered, attempt to disperse it by bathing it frequently with (No. 28). The only certain cure is an operation, for which, as there is no pressing danger, apply to a surgeon.

ENLARGED SPERMATIC VEIN.

SYMPTOMS.—A hard, knotty, and irregular swelling of the vein, which sometimes increases to a large size. When lying down the swelling diminishes, which distinguishes it from a dropsy of the parts.

TREATMENT.—Suspend the testicles, or keep the patient on his back,—apply a Lotion made by dissolving a drachm of Sugar of Lead, (No. 42,) in a pint of water to the parts,—the cold bath.

MERCURIAL DISEASE.

This is a complaint whose symptoms nearly resemble the secondary symptoms of pox, consisting of blotches on the skin,—pains at night,—ulcers in the mouth, &c., &c. Owing to the *liberal* use of calomel, it is now a very common disease, and is frequently confounded, (even by medical men,) with genuine syphilis.

TREATMENT.—Abandon every mercurial preparation, —use the decoction of lignum vitæ and sarsaparilla,—the warm bath, and a *mild* nourishing diet. If possible, remove to a healthy situation in the country. It is also necessary to take an occasional purgative, of the flowers of sulphur or of rhubarb.

APPENDIX.

About four years ago Mrs. Maury, somewhat notorious as the author of a book entitled "The Statesmen of America," became remarkably excited in behalf of immigrant passengers in our packet ships. Her movements were more particularly directed to their supposed want of medical attention on their voyage. In a second work entitled "An English Woman in America," she has occupied nearly two hundred pages with her sayings and doings with regard to "Immigrant Surgeons," showing that the annoyances shipmasters meet with, respecting medicines, &c., on the other side of the water are owing chiefly to her movements there. She sought to bring about the same results in this country. She enlisted in her efforts Mayors and Aldermen, Boards of Health, British Consuls, in New York, Philadelphia, Charleston, New Orleans, Mr. Buchanan, then Secretary of State, and lastly President Polk himself. She succeeded in getting a numerously signed memorial before Congress, which was referred to the Committee of Commerce, of which the Hon. Joseph Grinnell was chairman. She says, p. 100, "The Emigrant Surgeon's bill was frustrated in the United States by one man." Her efforts having come to my knowledge, and learning that she was likely to succeed, I sat down at a late hour one evening and wrote the subjoined letter. Mrs. Maury has thought that letter and its author worthy some notice in her last book, and given some garbled extracts and some false statements of it, and says that Mr. Grinnell handed her the letter, supposing that it would be as satisfactory to her as it was to him that professed surgeons were not necessary on board American ships. Careful observation and inquiry for more than three years past has fully satisfied me that the opinions expressed in the letter are correct. I have collected a great many facts of a most gratifying character to substantiate my views. While some shipmasters have preferred to be free of responsibility, and therefore employed surgeons,

I have yet to learn that the percentage of deaths has been lessened. Of one thing I am certain, that my own pocket has been benefited by the increased use of medicines. I ought therefore personally to be satisfied. I know of one ship which during two years had carried in sixteen passages about six thousand persons without a surgeon. Out of 4653 *steerage passengers* taken on board at Liverpool, she has landed 4651. Of the whole number of persons on board there have been but eleven deaths. Not one of these contracted the disease of which he died on board the ship. Three died of consumption, two of chronic diarrhœa, one of a urinary difficulty, and three were infants born on board. Similar statistics I have no doubt might be furnished had I time to make inquiry.

New York, March 24, 1846.

Sir:—As I was doing some business with Capt. —— at his lodgings last evening, he remarked to another shipmaster that he was writing a letter to you respecting a proposed law requiring emigrant passenger ships to carry surgeons.

I noticed some time since that a memorial upon this subject had been made to Congress. I then went to Mr. David Hale of the Journal of Commerce and gave him many facts, some of which you will find below. Believing that I occupy a position which enables me better to judge of the expediency of the proposed law than most men, I have, unsolicited by any one, taken the liberty of addressing you upon the subject. As my time is much occupied by my business I am not able to give this matter that arrangement which I desire. I shall therefore write right on as the ideas present themselves, regardless of order. Your colleague, Julius Rockwell, Esq., of Pittsfield, who was my college-classmate, can inform you whether my character will justify a reliance upon my statements.

Having had a regular medical education, I practiced my profession for several years. Under the urgent solicitations of a friend, ten years ago I entered upon the apothecary business. Three years afterwards peculiar circumstances led me to give particular attention to

supplying the shipping with medicines. As my business increased I was obliged to confine my attention almost wholly to this department.

Probably seven-eighths of Massachusetts vessels, nine-tenths of Maine and two-thirds of all the American vessels, carrying a medicine chest, receive their medical stores from my establishment. I am of course extensively acquainted with packet shipmasters and with shipmasters generally. I always know if sickness has occurred on board during the voyage, and usually receive an account of the treatment of the patients. Dislocations, fractures, simple and compound, other injuries, childbirths, fevers, &c., come under review. I have never heard of but one fatal case of child-bed-sickness, and that was a case of extreme difficulty even for an experienced accoucheur.

After putting up one thousand medicine chests I prepared a new medical manual, two copies of which I send you. Some of the best things in it I owe not to medical men, but to the experience and ingenuity of shipmasters. I have known cases of fractured limbs with laceration of the soft parts, which nine surgeons out of ten would have treated by amputation, saved under the surgical skill of the ship captain. I have known in two instances of a fractured thigh reduced and healed without any perceptible shortening, a rare occurrence under the treatment of the best surgeons. Shipmasters generally treat wounds of all kinds with good judgment. I would as soon trust those who are forty years old in tropical diseases as half of our northern physicians, especially if they were novices in the profession. The worst case of venereal disease I ever knew cured was treated by an American captain. The patient was an English sailor left in St. Domingo by his English captain to die. In blood-letting, tooth-drawing, and other minor operations, our seafaring friends are generally expert. Most of them have medical and surgical works in addition to the manual in the medicine chest. In my opinion they are as able to judge of symptoms as mere professional tyros, and such probably would be the surgeons on board of passenger ships.

The late Dr. Nathan Smith, professor of surgery at

Yale College, derived a most important hint from the quick thought of a sea captain in an emergency occasioned by the breaking of his tourniquet as he was amputating a limb. He ever acted upon it in after life. This I have from his own lips.

I learn that this movement respecting emigrant ship surgeons had its origin in two English passengers in the ship Hottinguer of this port. *British* ships may need professional surgeons. There are important differences between the masters and seamen of the two nations. I understand that custom or law renders it obligatory upon the British ship-owner to have a certain portion of his crew indentured apprentices. Consequently many dull, spiritless boys are placed on board of vessels and compelled to remain by the force of their indentures. When they arrive at manhood wealthy and influential friends procure them ships. Such masters need the aid of professional surgeons. American seamen are essentially a *picked* class of minds. They are universally volunteers. They go to sea because they have an enterprise, energy, and decision of character which leads them to *choose* to go to sea. Many of them have these characteristics so strongly developed as to break through their attachment to home and friends, and run away to rove upon the sea. These picked minds, as soon as on board ship commence a course of education in a constant series of emergencies, requiring them to think quickly and act quickly or all is lost. Thus they acquire the habit of prompt thought, prompt action, and of turning to good account the slenderest means in extricating themselves from difficulties. Probably no class of men so often succeed in employments to which they have not been accustomed as seamen. Is it strange then that they are found so competent to administer to the sick passengers and crews?

I do sincerely believe that if the proposed law should pass there will be more lives lost by young physicians tampering and fussing with sick passengers than are now under the present arrangements. If childbirth occur on board ship, and there is not female aid to be obtained, the master with his books before him will be as likely to do as well as a professional tyro, as experience

in midwifery is of more importance than in any other department of the medical profession.

Not long since a young unmarried Cape Cod captain informed me that the husband of one of his passengers called upon him to administer to his wife who was unexpectedly taken in labor. "I took your little book," said he, "and read and operated, and read again and operated, and so went through first-rate."

Capt. —— of ship ——, has successfully attended on seven such cases, and Capt. —— of the London packet ——, has had much larger experience. Should small-pox occur, the master will be as competent to treat it as a medical novice. [The most successful practitioner in this disease I ever knew is one of our New York shipmasters.]

It might be well to require that each emigrant ship should be supplied with vaccine matter and certain quantities of medicines and instruments. This is the only change in our laws that I think the case calls for. The list of articles you will see in my manual comprises about all that an intelligent physician would in general find absolutely necessary. I am told that surgeons in the East and West Indies rarely send ashore for other medicines when prescribing on board ship.

These are my genuine sentiments after extensive intercourse with masters and seamen, and putting up four thousand medicine chests, eight hundred of which I put up last year. I suppose my pecuniary interests would be greatly promoted by the passage of the proposed act, as double the usual amount of medicine is used wherever a physician is employed on board the passenger vessels. But a sense of justice and some gratitude has led me to volunteer in this business. If the above statements shall have any weight in preventing further restrictions upon our commerce, already too much fettered, I shall not grudge the time bestowed upon this letter. Will you please to lay this communication before the committee of which you are the chairman, if it is proper for you to do so.

Yours respectfully, THOS. RITTER, M. D.

To Hon. Jos. GRINNELL,
Chairman of the Committee on Commerce.

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